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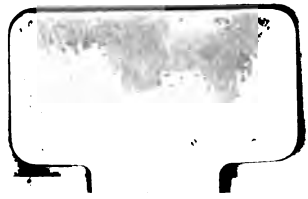

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CHAMBERS'S EDUCATIONAL COURSE—EDITED BY W. AND R. CHAMBERS.

THE

RUDIMENTS OF KNOWLEDGE,

OR

THIRD BOOK OF READING.

FOR USE IN SCHOOLS,

AND IN PRIVATE INSTRUCTION.

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PREFACE.

THE curiosity of young persons is necessarily first excited by the things which lie most immediately around them, and the circumstances and procedure of familiar life. These are the subjects of their earliest inquiries, and it is extremely desirable that clear, distinct, and correct explanations of them should be invariably given. Most parents of intelligent and well-regulated minds take care that such should be the nature of the answers given to the first inquiries of children; but it is needless to point out, that many persons who have children under their care, either possess not the ability, or have not the necessary leisure, or will not be at the pains, to give correct and satisfactory answers. It occurred to the Editors of this Educational Course, that the best means of ensuring that familiar things should be clearly explained to children, was to render them the subject of an early Reading-Book for school, in which they should be presented in order, and with a careful regard to the powers of young understandings. The present volume is consequently presented to the world, as an attempt to supply this desideratum. It is to be observed, that it aims strictly at an explanation of *external appearances* in the natural and social world. *Principles* are left to be adverted to for the first time, in the volume which succeeds in the Educational Course—entitled "AN INTRODUCTION TO THE SCIENCES."

Although very great pains have been taken, in this little volume, to express ideas in the most simple language, it has been found absolutely unavoidable in many cases to use words by no means familiar to young persons. It is expected, however, that the teacher will more than neutralise the difficulty thus occasioned, by the exercises to which he will subject the pupils on the meaning of words, according to the usual forms of the intellectual mode of instruction. A graver difficulty may be found in the nature of some of the subjects, as Government, the Faculties and Emotions of the Mind, &c. But here, also, the teacher must do his best to help out the ends of the compiler, giving all the additional explanation, and all the subordinate illustration, which he may have at command, or which may appear to him necessary. He will discover that there is scarcely a sentence in the volume which a person of ordinary intelligence may not greatly amplify, to the unspeakable advantage of the young learner.

THE

RUDIMENTS OF KNOWLEDGE,

OR

THIRD BOOK OF READING

INTRODUCTORY LESSON.

I AM a child, and do not know the meaning of many things which I see. When I look around me, I see all kinds of things, which I should like to be informed about. I see the sky over my head, and the ground on which I walk. I also see that some things are without life or motion, and that they lie where they are placed. I see that other things have life, and that they are able to move about from place to place. All this seems strange to me. But I am a scholar, and will listen to the instruction which my parents and my teacher give me. I will also try to learn to read this book, which will explain the meaning of many things that I see, and which it is proper for a young person to know.

OF GOD AND THE WORKS OF CREATION.

All the things which we see are called objects. Objects are of three kinds. The first kind are those which have life, and can move about in all directions, wherever they have a wish to be, and are called *animals*, or living creatures. The second kind of objects are things which grow

in the earth, as flowers, grass, and trees, and are called *vegetables*. The third kind of objects are those which have no life whatever; as the sky, the earth, stones, water, houses, furniture, clothes, and other articles. All these are called *inanimate objects*, and they are unable to move from the place where they are put.

All things have been made by GOD. In the beginning He made all things, both the objects which are inanimate, and those which have life. He made the sun, the moon, the stars, the earth or world on which we live, the sea, the herbs and trees, and all the animals which live on the land, in the air, or in the water. God is, therefore, called the CREATOR, which means the maker of all things, and His works are called the Works of Creation.

God is a spirit, and is invisible. Though He cannot be seen, He is every where, and is able to see all that we do, and know all that we think. God is also good and just in all his ways. He provides food for all living creatures. It is our duty to love God, and to pray to Him, and thank him for all his mercies.

Let us do no ill, so that God may love us, and take us into his holy keeping. The Bible is the word of God, which has been given to us for our instruction; and if we read and study it with an humble heart, we shall learn what have been the works of the great Creator, and how kind He has been to the children of men.

OF ANIMATED CREATURES.

All living creatures are animals. They live by breathing air, and by eating food with their mouths. Their food gives nourishment to their bodies; and if they could not get food, they would soon die of hunger. Most animals have senses, by which they can see, hear, smell, taste, and feel, or touch.

A doll has eyes, but it cannot see, neither can it use any other senses, because it is an inanimate object, and has no life. Life has been given to animals by God, and

He only can give life. A man can make a doll with a face and eyes, and he can dress it with fine clothes, but he cannot give the doll life. It remains only an inanimate object, without sense or power of moving.

There are many different kinds of animals, both large and small, in all parts of the earth, some of which live on land, and others live only in water. The chief of the animal creation is *Man*, beneath whom all the lower animals are placed, so that no one can rise equal to him in rank or power.

Beasts are animals covered with skins of hair, wool, and fur, and they walk upon four legs on the ground. Horses, cows, dogs, sheep, cats, and many other animals of this class, are beasts. Animals are also called *quadrupeds*, because they have four feet. Some beasts have feet of a single hoof, like the horse; others have feet with the hoof cloven into two, like the cow, the sheep, the pig, and the goat; and others have feet with toes and claws, like the dog, the cat, the tiger, and other creatures. The ox and the sheep are quadrupeds, which are killed by mankind for meat or food; their skins are made into leather for shoes; and the wool of the sheep is cut off and twisted into threads, and the threads are woven into fine soft clothing.

Birds are a very pretty kind of animals. They are covered with feathers, and have two wings on their sides, with which they can fly in the air, and go very great distances without being tired; they have also two legs and feet, with which they can walk on the ground, or stand on branches of trees. Some birds are very small, such as sparrows, and linnets, and wrens, and robin-redbreasts, which build neat little nests of moss and other things, in trees and bushes, to live in. Pigeons, and rooks, and crows, are birds of a larger size; and so also are hens, which we see walking about and picking up seeds. Ducks and geese are birds which love to swim in water, and they have two web-feet, with which they push themselves along in swimming. All birds lay eggs in their nests, and the young birds come out of the eggs, after they have

been sat upon for some time and warmed by the old birds. This is called *hatching*.

Fishes are animals that live altogether in water. They have skins with smooth shining scales, and they have fins on their sides, with which they keep themselves up in the water. Fishes can also swim forward very fast, and dart through the water after flies, or any thing else they would wish to eat. Some fishes are very large, much larger than a man; but others are small, such as herrings; and they swim in great numbers in the sea and in rivers.

There is another class of animals called *reptiles*, but we do not see many of them in this country. Reptiles, such as snakes, vipers, and adders, have clear shining skins like fishes, and they crawl with their bodies on the ground among the tall grass of meadows and in marshes. Some reptiles, such as the frog and toad, have feet, with which they can walk or leap forward. The frog is a very pretty reptile, which leaps, and is often seen in meadows or beside pools of water. We should not pelt frogs or toads with stones, or otherwise hurt them, for they are innocent creatures, and suffer as much from being pelted as we could do.

Insects are another class of animals, of which there are great numbers in this and other countries. Flies, gnats, bees, and butterflies, are insects which we see flying about in the fine summer weather, and sometimes they are very troublesome to us. But although insects are sometimes troublesome, they are very useful, because they are food to birds and fishes, and do other good services in creation.

Besides these classes, there are many kinds of animals so small that they cannot be seen by the eye, but which exist, and enjoy themselves according to their nature, in water and other substances. The whole of creation swarms with living creatures, large and small, and all designed to serve some purpose, though in many cases we are quite unable to tell what that purpose is. The most bountiful provision has been made by their Creator for the daily food of all the animals that exist. The greater number live by eating the herbage of the fields and plants, and

also the small seeds and fruits of trees. Others live by killing and eating creatures which are smaller and weaker than themselves, and which, if not thus destroyed, would become too numerous and troublesome.

Some of the larger quadrupeds, as the lion, the tiger, and the wolf, are beasts of prey, and live by chasing and killing sheep, or any other animals that cannot defend themselves. A few animals, such as the horse, the cow, the ass, the dog, and the cat, are fond of living under the charge of mankind, and taking what food is given to them. These are called *domestic animals*, and are of great use to us; they should be treated with much kindness for their docility and their services.

We should try to learn the nature and the names of animals, and how they are divided into classes and species. We should also never call any animal by a wrong name, but give every one the proper name that belongs to it. Some persons call a fly a beast, but it is not a beast; it is an insect. All animals with four feet are quadrupeds. A bird is not a quadruped, because it has only two feet, and it is therefore a *biped*.

For want of a knowledge of the nature and the proper uses of animals, some persons have held certain animals to be *sacred*, or worthy of great respect, and of being bowed down to and worshipped. These persons have also held other animals in such great abhorrence, that they would not touch them, or be kind to them. All this is very wrong. All animals are equally good in the sight of God, and should be the same in the sight of men. There are, indeed, no distinctions of rank among animals. The lion is sometimes called the *king of the beasts;* but this is only because he is a very powerful animal. The lion is no better than other beasts; and he is not so useful to mankind, or deserving of so much care, as the laborious and patient ass.

[In the course of the above lesson the teacher may show pictures of animals, and mention a few of the leading points in their character. It is, however, too early to define the scientific classification of animals; that forms a department in the more advanced work "THE INTRODUCTION TO THE SCIENCES."]

OF MANKIND.

Mankind are the *human species*, to which we belong, and they are above all the lower animals in power and wisdom. Mankind are also called *people*, and children are young people. A father and a mother with their children form a *family*. Mankind are beings with *reason*, or minds to think, and they are able to rule over all kinds of beasts, birds, or other creatures. They do not walk like beasts, but stand upright upon two legs, and they have arms with hands and fingers, with which they can do any work that they wish to do. They have not skins with wool or fur upon them. Their skins are naked, and they require to have clothes to cover them; but they are able to make clothes with their hands, and to use *tools*, with which they can build houses and make furniture, and do all other things that are useful. They can, likewise, kindle fires for cooking their food, and for warming themselves when cold.

Mankind do not like to live alone. They are fond of living in families, or with other persons, and also to have neighbours in *houses* near them. Some people live in the country in *cottages*, but most people live in houses near each other in *villages*, *towns*, and *cities*. A village is a small number of houses standing together. A town is a large number of houses standing together, with the houses placed side by side in rows or streets. A city is a very large town, containing a great number of people. The city where the head of the government resides, is the *capital* of the country. London is the capital of England. The house of a king, or of a prince, is called a palace.

The reason for people living together in towns and cities, is, that they may assist each other, and enjoy the pleasure of seeing and speaking to each other. This is called being *social*, or living together in *society*. All the people that live together in a country are its inhabitants,

and they form a *nation*. There are many countries and nations in the world.

Every person has two names, one of which is his *surname*, and the other his *Christian* name. The surname is the principal name, being that of the family to which the person belongs. The Christian name is that which has been given at baptism, and is always put first. If a person be called John Thomson, John is the Christian name, and Thomson the surname. I can tell what are my Christian and surname. Every boy and girl can tell, because they have been informed by their fathers and mothers.

All people have likewise a national name, by which they are known from people of other nations. We get a national name by being *natives* of a country, or being born in it. If we be born in England, we are called *English;* if in Scotland, we are *Scotch;* if in Ireland, we are *Irish;* if in France, we are *French;* if in America, we are *Americans;* and so on with every nation and people.

Some people have white skins, with blue or grey eyes, and light hair on their heads. Other people have dark skins, with black eyes and black hair. But all people are human beings, and are the same way made; and it is no matter what is the colour of their skins, or their outward appearance. We should never hate or ill use any persons because the colour of their skins is different from ours, or because their outward appearance is not beautiful, but be equally kind to all.

One of our hands is the *right* hand, and the other is the *left*. All boys and girls learn which is their right hand. It is that with which we shake hands, and is more used than the left. We have, also, a right and a left foot, and a right and a left eye, and a right and a left side. The left side is that on which we feel our heart beating. Every one knows what is meant when they are told to stand on the right or the left of a person; they go to his right or his left hand. It is a mark of honour and respect to be set at the right hand.

Animals rest and *sleep* when they are tired. When they sleep, they lie down and shut their eyes; and when sleeping, they enjoy rest. Some animals, however, such as the horse, can sleep standing; and some others, such as the hare, can sleep with their eyes open. The proper time for sleeping is in the night, when it is dark. When we sleep, we sometimes *dream;* but dreams are only idle fancies passing through the mind, and do not mean any thing. When animals are not sleeping, they are *awake.*

All animals, except man, eat their food in a *raw* state. The ox and sheep crop the green herbage of the fields just as it grows, and beasts of prey devour at once the flesh of the animals they kill. Birds, likewise, catch little flies while on the wing, and swallow them in a moment. Mankind cannot live on fresh vegetables, or raw food of any kind. They can eat only a little ripe fruit, or certain ripe vegetables, without being hurt by them. All their ordinary food has to be dressed at the fire; and when it is properly cooked, it is pleasant to the taste and nourishing to the body.

Mankind *cook* and eat the flesh of oxen, which is called *beef;* the flesh of calves, which is called *veal;* the flesh of sheep, which is called *mutton;* the flesh of swine, which is called *pork;* and also the flesh of hares, rabbits, geese, turkeys, chickens, pigeons, partridges, and other creatures. Mankind likewise cook and eat fish. The chief article of our food is bread, which is prepared from the flour of wheat, or other grain. We pray to God, that he may give us our "daily bread," which signifies our means of daily subsistence.

When animals are well, and are able to go about and take their food, they are said to be in *health.* Sometimes they are so ill that they cannot walk or take any of their usual food, and then they are in *bad health.* Mankind are most liable to be ill; diseases affect them, and they are sick. Physicians try to make them well, by giving them medicines; we should, therefore, never refuse any medicines that are offered to us when we are ill, for it is by that means that we may be made well.

Some animals live a long time, and others live but a very short time. Dogs are known to live till they are fourteen or fifteen years old, when they die; and some horses live till they are twenty years old. But little birds live only a few years, and most insects do not live more than one year. Some insects live only a single hour. The smallest kind of gnats sport for a short space of time in the beams of the sun, and then drop down, and are seen no more.

All animals are male and female, and have young animals like themselves, and these they leave behind them at their death. The young grow old in their turn, and then leave their young to come after them. This is called the following of one *generation* after another. Human beings live longer than most other animals. Some men and women live till they are above seventy years of age, but many die from illnesses when they are infants. The young people that are now at school and growing up, will perhaps live to be old people like their fathers and mothers, and grandfathers and grandmothers; but they will not live for ever. All must die, and leave room for new generations.

When a body is dead, all its life is gone. It cannot see, or feel, or move; it is an inanimate object, and is so unpleasing to look upon, that it is buried in the ground, where it rots into dust, and is no more seen on earth. But although the bodies of mankind die and are buried, they have *souls*, which live for ever, and which are given up to God who gave them. It is proper that we should live so purely that we may not be afraid to die, or to yield our souls at death to our Heavenly maker.

Mankind are called *rational* or *reasoning beings*, in consequence of having minds to reflect on what they see and do. They are also called *responsible* or *accountable beings*, because they have souls, which are accountable to God for actions done during life. But none of the lower animals are rational or accountable beings. They have not souls to be accountable, nor minds capable of thinking.

They do not know right from wrong. When a beast dies, it perishes for ever.

Human beings are very ignorant when they are young, and before they are taught the meaning of what they see. They do not know how large the world is, or what is its shape. They think that the world is flat, like a table, but they learn that it is round, like a ball. It is only by having been told, that they know their own name, or their right hand from their left. Children, being so very ignorant of all things, are sent to school to be instructed, and the more that they are taught, the more happy are they likely to be when they grow up.

THE COUNTRY—PROCESSES OF HUSBANDRY—VEGETATION.

When we walk into the fields in a fine summer day, we see many things that are very beautiful, and pleasing to behold. We see the fresh green grass growing in the meadows, mixed with cowslips and daisies, with the cows feeding upon them. We see fine large trees and bushes covered with leaves, and hear birds singing merrily on the boughs, and chirping to the young birds in their little nests. We also see the glorious sun shining in all his splendour, giving light and heat to the face of nature, and glancing on all kinds of flowers. Perhaps, also, we may see flocks of white sheep feeding on the sweet pastures, with their lambs frisking beside them, and shepherds with their dogs watching the flocks, that they may not go astray.

These are only a few of the things which are to be seen in the country, for the country is very large, and spreads away in *plains* and *hills*. It also contains *springs* of water, and *rivers* running through the valleys. In some [illegible]ces, there are *lakes*, which are large sheets of [illegible] in other places, there are marshes and mea-

dows with small ponds in them. Some lofty hills, which rise from the plains, are called *mountains*. There are *rocks* in the inside of hills and mountains, and also below the level ground.

It is in the country that most of the food that we eat is produced. The fields are first ploughed or dug up in furrows, by a *plough*, which is a machine drawn by horses, and guided in even rows by a man who holds it. The

business of a *ploughman* is very healthy and pleasant, for the ploughman breathes fresh air all day long, and sometimes he is so merry that he whistles as he drives his team of horses over the fields.

After the fields are ploughed, another man, called a *sower*, goes forth with a large quantity of corn; and he sows the corn by scattering it with his hand among the open furrows. This is called putting *seed* in the ground. After the sowing has been done, another man comes with a *harrow*, which is a rugged flat machine with teeth on its lower side, drawn by a horse; and the harrow being dragged over all parts of the field, the earth is covered in over the seed in the furrows, and then the seed is in a condition to grow, and produce more corn.

After all these things have been done, the rain falls on the earth, and sinks down to the seed, which it softens and causes to *sprout*. At first, each seed has but a small sprout, but the sprout is quickened by the heat of the

sun, and soon shoots above the earth, like a blade of green grass. It then grows tall, with an ear of corn at the top, and the sun ripens it, and makes it yellow. It is now ready to be cut down; and so, in *harvest*, all that is ripe is cut by reapers, some with scythes, and some with sickles. Corn is sown in the *Spring* season; it grows tall in *Summer*, when the sun is powerful; and is cut down in *Autumn*. After Autumn, the fields are bare, and the *Winter*, which comes next, is so very cold that few things grow.

The time of harvest in Autumn is a pleasant, happy time. Here is a picture of two reapers cutting a field of corn. See how active they are, stooping with their sickles,

and cutting bunches of the stalks. See, also, how a man behind them is binding the sheaves, and a cart is going loaded with the sheaves to the barn-yard of the farmer. The barn-yard is near the farm-house among the trees.

Wheat, and oats, and barley, are *corn*, and are all reaped in this way. After the corn has been taken to the barn-yard, and the ears have been thrashed to loosen the grains from the straw, the grains are ground in a mill, and become flour or meal, which is made into bread for us to eat.

Here is a pretty little poem on the flowers which we can gather in Autumn, when the reapers are busy in the fields.

HARVEST-FIELD FLOWERS.—BY MARY HOWITT.

Come down into the harvest-fields
  This autumn morn with me;
For in the pleasant autumn fields
  There's much to hear and see.
On yellow slopes of waving corn
  The autumn sun shines clearly;
And 'tis joy to walk, on days like this,
  Among the bearded barley.

Within the sunny harvest-fields
  We'll gather flowers enow;
The poppy red and the marigold,
  The bugles brightly blue;
We'll gather the white convolvulus,
  That opes in the morning early;
With a cluster of nuts, an ear of wheat,
  And an ear of the bearded barley.

Bright over the golden fields of corn
  Doth shine the Autumn sky;
So let's be merry while we may,
  For time goes hurrying by.
They take the sickle from the wall
  When morning dews shine pearly;
And the mower whets the ringing scythe,
  To cut the bearded barley.

Come, then, into the harvest-fields;
  The robin sings his song;
The corn stands yellow on the hills,
  And Autumn stays not long.
They'll carry the sheaves of corn away,
  They reaped to-day so early,
Along the lanes, with a rustling sound,
  Their loads of the bearded barley!

There are many other things which grow in the fields for the food of man, besides corn. Potatoes are planted in rows in the fields, and after they have grown, the young potatoes are found at the roots; they are then dug up from the earth, and carried away for use. Turnips are sown in the ground as seed; and each seed, though only the size of a small pin-head, grows to be very large. Peas and beans are also sown in fields and in gardens, and the young peas and beans grow in pods on the tops and sides of the stalks. The pods are shells, in which the young peas and beans lie in even rows. Apples, and pears, and cherries, are *fruits;* and they grow on trees in gardens and in orchards. Oranges and grapes are also fruits; but they grow in warm countries. Gooseberries and currants are very good small fruits, which grow on bushes. The gooseberry bushes have sharp prickles on the branches, and we must take care not to hurt ourselves when we pluck the fruit.

All things that grow in the earth, in fields, gardens, and by the sides of pools, and every where else, are called *vegetables*, and the act of growing is termed *vegetation*. Vegetables are said to be *alive* when they are growing, and *dead* when they wither and cease to grow. But vegetables cannot remove from one place to another like animals. They must stay in the place where they are growing. Some people, however, plant pretty flowers in flower-pots; and then they can lift the pots, with the flowers in them, from one place to another, sometimes letting them stand in rooms, and at other times putting them on the outsides of windows, so that the sun may shine upon them.

Vegetables grow by drawing up sap from the ground through the roots, and the sap rises from the roots to the stem of the plant, and then through all the branches. Unless, however, they had the heat of the sun, vegetables could not grow. When the bleak cold days of Winter come, the sap goes down again into the earth, or helps to increase the bulk of the plant, the leaves wither and die, and the plants are bare till the warmth of Spring again

revives them, and causes them to push forth new buds and leaves. All vegetables yield seed after their kind, and with this seed, young vegetables may be raised. There are new generations of vegetables, like new generations of animals, and one follows in succession after the other.

INANIMATE OBJECTS—STONES, SLATE, GLASS, CLAY, BRICKS, METALS.

The streets are paved with *stones*, and many houses and walls are built with stones. Most of the stones which we see are dug from the ground. The earth is opened, and then rocks are found beneath, in large masses, and of different kinds. The stones are pieces of the rocks broken away with hammers, and shaped into the sizes that are wanted. The place where stones are dug from the rocks, is called a *quarry*.

Some stones are hard and solid, and others are soft and brittle. Those which are hard and solid are the best for building, because they last longest. Soft stones are melted down by water washing upon them, and their particles form sand. There are beautiful shining sands on the sea-shore, which have been washed from rocks. Most stones are opaque, or so dull that you cannot see through them; but some stones are transparent and sparkling, and you can see through them as if they were glass. *Slate* is a kind of blue stone, found in layers, and cut in small thin pieces for putting on the roofs of houses. When polished, the pieces can be made into school-slates.

Glass is a clear smooth substance, made of sand melted by a strong heat, and the ashes of certain plants. When hot, it is soft, and is easily made into a flat sheet; and when the sheet is cool, it is glass. Small pieces are cut from the sheets of glass to make panes for windows. Glass is a fine transparent substance, very brittle, or easily broken. Boys should be careful not to break the glass in windows, for it is very dear. But if they break it by accident, they should always tell that it was they

who did it, and then that will save others from being blamed. Crystal is a fine kind of glass.

Clay is a fine soft substance found in the earth, which is formed into jugs, basins, plates, and other articles. But these are not ready for use till they have been baked with a fire, and glazed to make them smooth on the surface. When finished, they are called *earthen-ware*. *China* is a fine kind of earthen-ware, made from ground flints. Flower-pots are brown unglazed earthen-ware. We cannot see through earthen-ware as we see through glass, because it is opaque. Most objects or substances are opaque.

Bricks are also made of clay. The clay is moulded into the form of bricks, and then burnt with fire in a large kiln. After the bricks are cooled, they are carried away to build houses and walls. Bricks are not so hard as stone, but they are much used for building where stone is difficult to be got. London, Dublin, Manchester, Liverpool, and other large towns in England and Ireland, are built of brick. Brick is little used in Scotland, because stone is very plentiful in that country. The red tiles for the roofs of houses are made of the same kind of clay as bricks.

Many useful things which we see are made of *metal*, of which there are different kinds. Metals are found among rocks, usually mixed with earth and rocky substances. They are then called *ores*. The ores are put into furnaces, and the metal then comes out pure. When cool, it is ready for use. Metals are hard, but not so hard as stones; they are also malleable, which means that they can be beaten out into thin pieces by hammers, without being broken. Some are softer and more malleable than others; and they are all very heavy. The principal metals are Gold, Silver, Iron, Copper, Lead, and Tin.

Gold is a yellow metal, and is very scarce and dear. It is made into money, also into rings for wearing on the fingers, and other trinkets. *Silver* is a fine white metal, which is also made into money, but is not so valuable as

gold. *Iron* is the most useful of all the metals. It is made into nails, locks, hinges, hammers, axes, and all other tools. Pots, kettles, and other vessels for cooking, are also chiefly made from iron. Iron, when made very hard, is called *steel*, and is made into knives, needles, and other things. *Copper* is brown, and is made into pennies and halfpence, also into large sheets for various purposes. *Lead* is light blue in colour, and is softer than the other metals. It is made into pipes and cisterns for water, and many other articles. *Tin* is of a light colour, but harder than lead. It is very useful for covering the insides of cooking utensils.

Some articles are made from two metals mixed together when they are melted and hot. *Brass* is a very pretty light yellow metal, made from a mixture of copper and tin. A great number of ornaments for furniture are made of brass. Bells are also made of a mixture of copper and tin, but chiefly copper. Some bells are very small, for hanging in houses, and are pulled with wires to warn servants that they are wanted. Other bells are very large, and are as tall as a man. These large bells are hung in steeples of churches, and they are rung to warn people that it is time to go to church. Bells are also rung to call children to school, and to let workmen know that it is time for them to go to work. Small bells have a brisk sound; but large bells give a loud sound, which is heard at a great distance. We can also cause glass cups to make a sound when we strike them; but if we strike too hard, we shall break them. Bells are not so brittle as glass; they are tough or pliable, and do not break when they are rung. Lead and tin mixed, form *pewter*, with which spoons, dishes, and many other articles, are made.

[In the above lesson only the principal kinds of inanimate objects are mentioned. It is presumed that the pupil has been instructed in the nature of most objects of a simple kind at the Infant School; but if this has not been the case, the teacher can exhibit and explain the qualities of many objects, both natural and artificial, with a view to intellectual exercise. Most schools now possess an extensive collection of objects for the instruction and amusement of pupils.]

WOOD—TREES.

There are many kinds of *wood* or timber, some of a coarse, and others of a fine quality. When trees have grown for a great number of years, and are tall and thick, they are cut down at the root, the branches are lopped off, and the trunks form wood or timber. The wood is next sawn into long deals and beams with saws, and is ready to be made by carpenters into chairs, tables, school forms, the floors of houses, doors, carts, and a vast number of other things. Fir, ash, elm, beech, and oak, are the most common kinds of wood in Britain; and of these, fir is the commonest, and oak is the strongest. Mahogany is a very fine wood, which is brought from foreign countries, and is made into beautiful tables, chairs, and other articles.

TREES.—BY J. MILNE.

In India there are spicey trees,
Whose fruit and gorgeous bloom
Give to the faint and languid breeze,
Its rich and rare perfume.

In Portugal and fertile Spain
Abound the orange groves;
In France, the juicy vines they train
Around the trim alcoves.

Where South American forests spread,
And savage Indians roam,
The huge mahogany rears its head
To deck our British home.

But fruits, and plants, or trees like these,
Our climate will not suit;
Yet we have many useful trees,
For timber or for fruit.

The sombre yew-tree often lends
Its greenness to the grave;
The weeping-willow fondly bends
Its branches o'er the wave.

The birch displays its slender tress,
Yet beautifully fair;
The poplar waves its slender dress
With slightest breath of air.

The elm lifts up a lofty head,
And first in leaf is seen;
The beech extends an ample shade
Of leaves of glossy green.

The stately oak, the forest's pride,
A stem enormous shows;
And, spreading out on every side,
Gigantic branches throws.

Its leaf is late in spring, yet shares
The zephyr's gentle sigh;
And late and long in autumn wears
A deeper, richer dye.

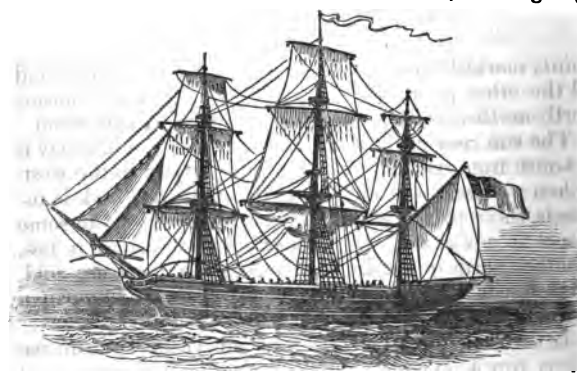
Trees not only furnish savoury fruits; their aspect is delightful, and their shade is refreshing during the heats of summer. Sometimes trees grow singly in fields and gardens, and sometimes a great number of them grow together in plantations and *forests*. There are not many large forests in Britain, because the land has been cleared for cultivation; but in North America there are forests which cover large tracts of country, and they are only now in the course of being cut down. Much of the timber that is used in this country has been brought in ships from North America.

Trees grow, like other vegetables, by the sap rising from the roots through the trunk to the branches. Every tree is clothed with a bark or skin, which is of great use in protecting it from injury, and assisting it in its growth. If the bark of trees be much injured, the trees become weakly, and soon die. It is very wrong, therefore, for any young person to strip, cut, or otherwise injure the bark of trees. They do not know the harm they are doing. I will never do injury to a tree.

WATER—THE OCEAN—SHIPS—THE COMPASS—FISHING—RIVERS.

Water is a liquid body. It flows in streams, and can be poured from one vessel to another. A great part of the world is covered with water, in the form of broad seas, called the Ocean. The water of the ocean is salt, and so bitter that it cannot be drunk.

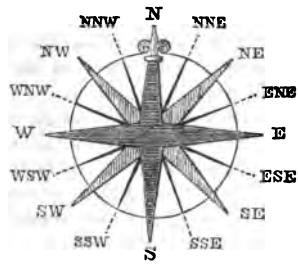
Ships sail on the sea, and they can go from one country to another across the ocean, by the winds blowing their sails, and the pilot guiding them with a *helm* or rudder. Here is a picture of a ship, or vessel, sailing on the sea. It has all its sails set to the breeze, and is going



fast along the surface of the deep waters. Some ships have a great number of sailors or mariners in them to manage the sails, and take care that all goes right in the vessel. The person who has the command of a vessel is called the *captain*. It is an awful thing for a vessel to be overtaken by a storm, and dashed upon rocks or sand-banks; then the ship is *wrecked*, and perhaps all the persons on board are drowned.

Mariners guide their vessels across the sea without

seeing any land; but they do not lose their way, because they have the *compass* to direct them. The compass is a small object like the face of a watch, with a needle balanced upon it, which always points to the North. Here is a representation of a mariner's compass, with all the



points marked upon it—North, South, East, West, and all the other points between, as N. N. E., which means north-north-east, S. S. W., south-south-west, and so on.

The sun rises in the morning in the east; at mid-day it is south from us; and in the evening it sets in the west. When we stand with our face to the south, our back is towards the north. When a person wishes to go to some place at a distance, he asks in what direction it lies, whether north or south, east or west, and on being told, he proceeds accordingly. In this way, every place in a town, or in a country, can be easily found out.*

In clear nights when the stars are visible, we can see a star very high above us at the north, which is called the *North-Star*. Young persons should learn to know the north-star, so that when they are out walking at night, they may understand which is the north. Mariners know the north-star, and they can guide their ships by it; but they do not need to look at it, for they have the compass with them, which tells them which is the north, either by day or by night. If they wish to sail

* The teacher may here exhibit a small compass, and further explain the nature and utility of the instrument.

northwards, they go as the needle of the compass points; if they wish to sail southwards, they go in an opposite direction; and so they go in any other direction, always looking at the compass.

A great number of different kinds of fish live in the sea, some swimming about in the water, and others inhabiting shells, which are scattered along the bottom of the ocean, or among rocks on the shores. Fishermen go to sea in boats to catch fish, which they bring to land, and sell to people who wish to have them for food. The fish are caught in nets, a considerable number at a time. The net is let down from the boat, and in a little time pulled up again, bringing with it all the fish that come in its way. Here is a view of three fishermen at sea in a boat, and we see them hauling in their net with a quantity of small fish in it.

All rivers and streams are of fresh water. They rise from springs, and also collect the rain which falls on the ground. After flowing perhaps many miles, they go into the ocean; but the ocean is never any larger for all the rivers that go into it, for mists or vapours are continually rising from it into the air to form clouds, and that takes away as much water as the ocean gets from rivers. The clouds turn into rain, which falls on the earth, and helps to give water to the rivers.

THE SENSES.

Mankind have five senses, which are of great use to them, and without which they could not know any thing of the world about them. These senses are *seeing*, *hearing*, *smelling*, *tasting*, and *feeling*, or *touch*. We use these senses by means of organs. The word *organ* signifies tool or instrument. The organs of seeing or sight, are the eyes, which are also sometimes called the organs of vision.

The *eye* is a very beautiful clear object, round like a ball, and is set in the head in such a way that we can move it about in its place, so as to look on different sides of us. The eye can see only when there is light. At night, when there is very little light from the moon and stars, it is difficult for the eye to see any thing; and if there be total darkness, we cannot see at all. The eye is very delicate, and is easily injured; but a thin covering hangs over it, called the eye-lid, which is pulled over the eye when we fear that it will be hurt; and this eye-lid is always closed when we go to sleep. The eye is also protected by some little hairs which grow out from the edge of the eye-lid, and are called the eye-lashes. These eye-lashes keep small particles of dust and flies from going into the eye, and likewise form a shade to keep off the too powerful glare of the sun.

Some boys and girls lose the use of their eyes by severe distempers, and some old persons also are deprived of their sight by injuries, which is a great misfortune. Persons who cannot see are said to be *blind*, and they are not able to go any where, without groping with their hands or their feet, lest they fall or stumble. They have to use the sense of touch instead of the sense of sight, and are obliged to trust to other persons telling them what many things are like in the world. Yet blind people

are often very happy and cheerful, because they know that it would be useless to murmur at their lot, and because all good people are kind to them.

A small part in the centre of the eye is clear, like a looking-glass, and all the objects we see are reflected on it. This reflection of objects is like a little picture in the eye, and the picture is carried by a nerve to the brain, which gives us the idea of seeing. It is very difficult to understand how the mind is made acquainted with the picture of the objects in the eye, so as to give us the idea of seeing; but when we are more advanced in our studies, we shall be better able to comprehend the process of vision, and also the action of light.

The organs of the sense of hearing are the *ears*. The sounds that are made enter the orifice or opening of the ears, and strike against a membrane which is spread like a drum inside, and from that the mind has the idea of hearing. Some sounds are pleasant to hear, and others are unpleasant. Sounds which are pleasingly arranged, are said to be in *harmony* with each other; and those which are displeasing, are called *discordant*. Some persons are so unfortunate as to lose the sense of hearing, and then they are *deaf;* they cannot hear any thing that is said to them, or any sounds that are made. It is by the sense of hearing that we enjoy *music*, which is a harmonious arrangement of sounds made by the voice in singing, or by instruments, such as flutes, violins, and pianos.

The *nose* is the organ of the sense of smelling. Fine nerves are spread over the inside of the nostrils, and these are able to smell any odour which is in the air, or which comes from any flowers or other objects having a scent.

The organ of the sense of tasting is the *tongue*, which is also covered with fine nerves, and these in a moment distinguish or know the taste of any thing put into the mouth. Some things are sweet to the taste, and some bitter; and some articles have no taste of any kind—they are tasteless or insipid. Smelling and tasting are the least useful of our senses.

The hand is the chief organ of touch or feeling; but the sense of feeling extends all over our body. The ends of the fingers have very fine nerves for feeling. The sense of touch is of great service in assisting or helping the sense of sight. Little children learn the shape of many things by both seeing and handling them. In this way, by the senses acting together, we in time learn to know the shapes or figures of things, and to distinguish one object from another.

By exercising or making use of all our senses, and remembering to the best of our ability what we see and what we hear, we gain *experience*, and are better able to take care of ourselves. Thus, the senses are of very great use to us. They are like roads or avenues, by which knowledge reaches the mind; and without them, we should be in a state of total ignorance.

Quadrupeds, birds, and other animals, have the same senses as mankind, but in some cases their senses are much more powerful. The cat has a much stronger sense of hearing, and some kinds of dogs have a much stronger sense of smelling, than we have. The reason for this is, that the cat has to listen for the approach of its prey, such as mice, in darkened places; and some dogs have to seek out or hunt their prey by the scent which the prey leave behind them. Other dogs, which do not hunt by smell, but by sight, possess a powerful sense of seeing, by which they can perceive the animals they are seeking at very great distances.

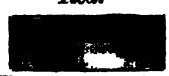
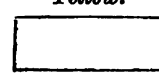
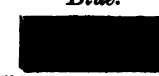
Cats have the power of enlarging the seeing part of their eyes, so as to see much better than we can when there is partial darkness; but when light is altogether withdrawn, and there is total darkness, cats are not able any more than human beings to see any thing. The Creator has given all other animals senses more or less powerful to suit their nature or necessities. Nothing has been made imperfect.

COLOURS AND TINTS.

All the works of nature have been contrived so as to give pleasure in looking upon them. The sky, the fields, the flowers, the covering of animals, and, generally, all things, possess the most lovely *colours* and *tints*, and these colours we delight to look upon. The colour which the eye can look longest upon with pleasure, is green; and, therefore, there is more of green than of any other colour in nature. Some greens are bright and light, and others are of a darker shade or hue; and these varieties are seen in the herbs of the field, and the leaves of trees and bushes.

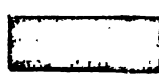
There are many different colours or tints in the works of nature, and also in objects made by the art of man; but all the colours that we behold or can imagine, are formed of only three colours, called the *primary colours*—the word primary signifying first or original. The three primary colours, out of which the others are formed, are red, yellow, and blue, as here represented.

Red. *Yellow.* *Blue.*

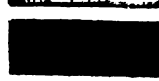




When these colours are mixed in different ways, they form other colours or tints, called *compound colours*—the word compound signifying a putting together or mixing of two or more things, and so making them into one. The following are some of the principal compound colours:—

Green, which is a mixture of yellow and blue. The more blue and less yellow there is in the mixture, the green is the darker.



Orange, which is a mixture of yellow and red.



Purple, which is a mixture of blue and red. By adding more blue to the mixture, we make violet.

Brown, lilac, drab, grey, and other colours or tints, are in the same manner formed by mixing the primary colours. White is perfect lightness, or the absence of all colour, and black is perfect darkness. Properly speaking, white and black are not colours, but they are seen both in nature and art. Snow gives us one of the best examples of whiteness; and pure linen and cotton cloth and paper are likewise very white. White is sometimes called *blank*, as, blank paper. Perfect darkness at night, or in a room in which there is no light, gives an example of black. Some clothes are dyed black, and so are men's hats.

A beautiful example of the various colours in nature is seen in the bright tints of flowers, and the plumage of birds. The rainbow also shows a fine assemblage or meeting together of colours placed in *harmony*, or in an agreeable connection with each other. The colours of the rainbow, which are caused by the shining of the rays of light of the sun through the drops of rain in a shower, consist of the three primary colours, and four compound colours, in the following arrangement, beginning at the top of the bow—red, orange, yellow, green, blue, purple, and violet. This arrangement of colours is also seen in the shining of the rays of light through a piece of crystal, called a *prism*, and they are therefore sometimes called the *prismatic colours*.

SPEAKING—LANGUAGE.

Men express the ideas in their minds, or their thoughts, by certain sounds uttered by their mouths. The *tongue* is the chief thing used in making these sounds, which are called *language*, from a word meaning the tongue. To utter such sounds is to speak, and the power of uttering them is called *speech*. Beasts, birds, and other animals, have not the power of speech; although they have some kind of feelings, they cannot make known these feelings in *words*. All that animals can do in the way of speaking, is to make certain *sounds* or *cries*. The horse neighs;

the dog barks, growls, and whines; the cock crows; the hen cackles and clucks; the cow lows; the sheep and lambs bleat; lions roar; birds sing and chirp; frogs croak; and snakes hiss. By such sounds they express pleasure, or pain, or anger, or defiance, or supplication. In general, the animal only means to let its companions know that it is near at hand. When the blackbird whistles, its mate hears the far-sounding notes, and comes quickly to it.

The sounds and cries which animals make, are sometimes called the language of beasts and birds, but it is a language of a very imperfect kind. Parrots and cockatoos can be taught to utter words, but they do not know the meaning of what they say; they only repeat by rote what they are taught.

THE COCKATOO.

There is a bird of plumage rare,
  In gilded cage exposed to view,
Procured with cost, preserved with care—
  We mean the *pretty cockatoo.*

He is a foreign bird of fame,
  And talks as parrots often do;
For if we ask him what's his name,
  He'll say 'tis *pretty cockatoo.*

Yet in these words repeated o'er,
  Does all this scholar's wisdom lie;
For to a thousand questions more
  He only gives the same reply.

If asked who made his gilded cage,
  Or who his master's portrait drew,
Who was in Greece the wisest sage?
  He'll say 'twas *pretty cockatoo.*

Thus may children sent to school,
  Perform the same unmeaning rounds;
Learn all by oft-repeated rule,
  Yet see no meaning in the sounds.

But we should never thus by rote
  Run day by day our lessons through,
And never give the sense a thought,
  Like prating *pretty cockatoo.*

A bird may come to sound its name,
  A bird may almost learn to spell,
But boys and girls may surely aim
  At something more than birds can tell.

The wreath which winds round wisdom's bough
  Is free to all, though cropp'd by few;
And we may pluck a leaf e'en now,
  And shame the *senseless cockatoo.*

The want of the powers of thought and speech keeps animals in a humble station, far below that of human beings. They cannot tell each other where they were born, or how old they are, or what is their name, or any thing else connected with their condition. They, therefore, cannot instruct each other, or lay plans to make themselves happy. And though we were to make any animal very clever at playing tricks, still that animal's young ones would be just as ignorant as ever. All living creatures, except mankind, are fixed down for ever to a humble condition, and can be easily subdued and ruled over.

The faculty of language has been given to mankind for the wisest of purposes by his Creator. We are able to speak, because our minds have the power of thinking or reflection, and because our tongue is able to utter the words which the mind thinks upon. The tongue, and the windpipe through which the sounds come, are called the *organs of speech.* Some persons are so unfortunate as to be unable to speak, and they are said to be *dumb.*

By speaking, we can communicate our thoughts to each other. We can tell of all the things that we have heard of from our fathers; and men who are learned, and have studied much, can tell the young and the ignorant of many things that they would perhaps never find out

themselves. In this manner, by one telling another, every new generation is a little more intelligent than that which went before it, by which means the human mind is greatly improved.

All persons learn to speak when they are very young, and they are generally taught to speak by their mothers. On this account, the language which any person first learns to speak, is called his *mother-tongue*. All persons should try to speak as well as they can. They should always speak plainly in words which can be well understood, and in all cases speak nothing but the truth. They should never say one thing and mean another, for that is the same as lying, and lying is one of the worst of vices. Every person, also, whether young or old, rich or poor, should avoid coarse or improper language, and always speak kindly to one another, so as not to hurt the feelings of any one by harsh expressions.

Almost every nation has its own form of speech or language; so that the people of one country do not understand what the people of another country say. The language which we speak is called the *English* language, because it was first spoken by the people of England. The language spoken in France is called the *French* language. The language which was spoken by the ancient Jews, whose history is told in the Bible, is called the *Hebrew* language; and it is now not generally spoken by any people. The language which was spoken in a country called Greece, about two thousand years since, is called the *Greek* language; and it is now, also, not generally spoken by any people. The language which was spoken by a people called the Romans, who existed about the same time as the Greeks, is called the *Latin* language; and it is now, also, not generally spoken.

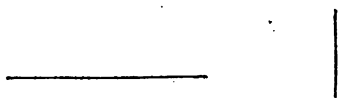
The Greek and Latin languages, in consequence of not being now spoken by any nation, are usually called *dead* languages; they are, also, called the *learned* languages, because many learned men wrote their works in these languages.

FORMS OF OBJECTS.

All the objects which we see possess a certain *form* or *shape*. We know forms or shapes by the senses of seeing and feeling, and by *comparing* them in our minds with other forms and shapes. It is very useful to be able to perceive, recollect, and name, the shapes of things. Those who do not pay attention to this, can never tell the exact form of any thing; they are always making mistakes, and frequently do not understand what people say to them. Let us try to avoid this appearance of ignorance, and make ourselves well acquainted with the different forms of objects, and the names which are ordinarily given to them.

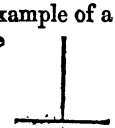
Every one knows what a *straight* line is. It is a line drawn straight from one point to another. If we take a piece of paper, a ruler, and a pencil, and draw the pencil along the edge of the ruler on the paper, we shall draw a straight line, thus _____ Also, if we fold the paper evenly, we shall make a straight line by the fold; a straight line, therefore, can be understood, although it is not marked with ink or a pencil.

A straight line may be in any direction, up or down, or sidewise. When it is level, or even from one side to another, it is called a *horizontal* line; when it is even up and down, it is called a *perpendicular* or *vertical* line.



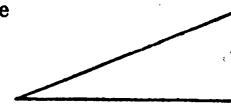
Horizontal line. Perpendicular line.

The following is an example of a perpendicular line rising from a horizontal line



Straight lines may also be *oblique*, or *diagonal*, thus,

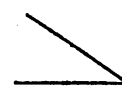
The following is an example of an oblique line rising from a horizontal line



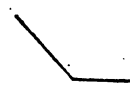
Sometimes a line sloping up in this way is called an *inclined plane;* a sloping road going up a hill is an inclined plane.

When one line rises straight up from another, as in this case,

the corner which is made where the two lines touch, is called a *right angle.* If the line rises with a slope, thus,



the corner or point where the lines join, is called an *acute angle.* But if the line rises or goes off in this way



the angle is called an *obtuse angle.*

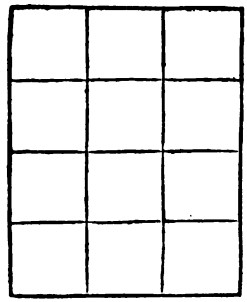
Four straight lines of equal length joining together, so as to make four right angles or corners, form a *square* or *quadrangle.* If the lines on opposite sides be longer than the other two at the ends, an *oblong* or *parallelogram* is

Square.

Parallelogram.

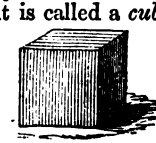
formed. It is called a parallelogram, because the lines are parallel to each other, or lie evenly opposite each other.

Here is a figure of a window; it is formed of twelve

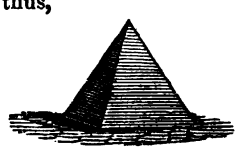


squares, with four perpendicular lines, and five horizontal lines. All the corners of the squares are right angles. When lines cross in this manner, they are said to *intersect* each other. When a pane of glass is broken in a window, it generally shows cracks in all directions, some horizontal, some perpendicular, and others oblique.

We see straight lines in many objects of art. The edge of a book or of a table, the seams in the floor, the roof of a house, and the sides of doors, are examples of straight lines. When an object has four sides of equal size, and is perfectly square, it is called a *cube*.



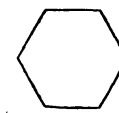
A *pyramid* is an object with four equal sides, but the sides become small or narrow as they rise and come to a point at the top, thus,



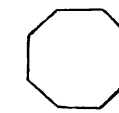
The top of figures of this kind is called the *apex*. The bottom of all buildings, of whatever form, is called the *base*.

When three straight lines join each other, they form a *triangle*. The side of a pyramid is triangular. An object with six sides of equal length has six corners or angles, and is called a *hexagon*. An object with eight sides of equal length is called an *octagon*.

Triangle.



Hexagon.

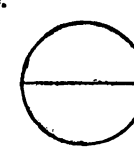


Octagon.

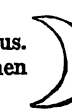
All lines are not straight. There are lines with curves or bendings. Here is a *curved* or bent line.

We see many instances of bent lines both in the works of nature and art. There are, indeed, very few straight lines in nature; trees are curved or round in their stems, the sun and moon are round in figure; rivers turn and wind in their course; and our own bodies are full of curves or bends. Bent lines are more beautiful than straight ones; but it is always shorter to go in a straight line than in one with turnings.

A figure drawn perfectly round is called a *circle*. The entire line forming a circle is the *circumference*; and a line drawn across the middle or centre of a circle, from one side to another, forms the *diameter*. The half of a circle is called a *semicircle*.

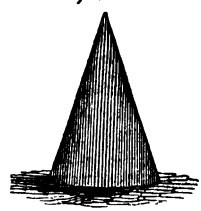


A *crescent* is a portion of a circular object, thus. The moon has the appearance of a crescent when it is new, or only a few nights old.



The figure of a tube, or a roll of paper, is an example of a circle and straight lines in one object. The roll is round, both on the outside and inside, while the lines along from one end to the other are straight. The lines of the sides are also parallel to each other. An object of this form is also sometimes called a *cylinder*.

A roll may be made with a piece of paper, so as to have oblique, not parallel sides. A figure of this kind is called a *cone*, or its shape is called conical. A sugar loaf is conical, broad at the base, and small at the apex.



Some figures are of an *oval* form, thus. An oval is also called an ellipsis. The oval is not a true round or circle; it is like a circle drawn out on two opposite sides. An egg is oval or elliptical in figure, but it is not a perfect oval, because one end of the egg is generally smaller than the other.

Every young person knows what is meant by a flat surface. The table is flat, the floor is flat, and many other things are flat. Some objects, however, are not perfectly flat; they have a rounded or bulged out surface. When a surface rises in this manner, it is said to be *convex*. Here is a specimen of a convex surface rising from a flat surface.

Some objects are convex on two sides, thus,

The glasses in spectacles are generally convex, or thicker at the middle than they are at the sides.

Surfaces may be *concave*. A concave surface is a rounded hollow like the inside of a basin. A flat object may also be hollowed out so as to form a concave surface on one side, or it may be hollowed on both sides to form a double concave.

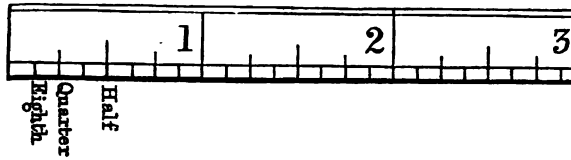
[The figures presented in the foregoing lesson are necessarily only rudimental. By means of chalk, a pair of large compasses, and the black board, innumerable combinations of straight and curved lines may be formed, so as to serve an important end in intellectual exercise.]

SIZE AND MEASUREMENT OF OBJECTS.

Objects are of different sizes; some are large and some small. A hill is larger than a house, a man is larger than a boy. We know the size of objects, in the same way that we know their shape, by the senses of seeing and feeling, also by comparison. Objects have three qualities in their size—length, breadth, and thickness. These qualities are called their dimensions. The longest way of an object is its length. From the top of a book to the bottom is its length; from one side to another is the breadth; and its thickness is its bulk from the outside of one board through to the outside of the other.

The length of objects can be measured. We can measure the length of a piece of cloth, and measure the distance from one place to another. There is an object called a *foot-rule*, which is used by carpenters and tradesmen for measuring the lengths of things. It consists of thirty-six equal portions, called *inches*, and each inch is divided

into halves, quarters, and eighths. The following is a representation of three inches of a foot-rule.



Each inch is seen to be divided into eight parts or eighths; and in the first inch, the eighth, quarter, and half of the inch, are marked. Twelve inches make a *foot*, and thirty-six inches, or three feet, make a *yard*.

The distance from one place to another is measured by miles. Seventeen hundred and sixty yards make a *mile*, which is a space that a boy may easily walk without being tired. Some streets in large towns are a mile in length. Three miles form a *league*, but it is chiefly distances at sea that are measured in leagues.

The *height* of objects can be measured in the same manner as their length. We can measure the height of doors or windows, or houses, or the height of mountains. The doors of rooms are generally from six to seven feet high; some houses are fifty feet high, but others are sixty or seventy or more feet. Some hills are one mile, and others several miles in height. The length downward of objects is called *depth*, and can be measured the same as height. Some wells are a hundred feet deep, and many coal-mines are five hundred feet deep.

Some objects are *heavier* than others. A large stone is heavier than a small stone; a piece of iron is heavier than a piece of wood of the same size. Many articles are sold by their *weight*, which is the measure of their heaviness. A common measure of weight is a *pound;* there are four pounds of weight in a large loaf of bread. A pound consists of sixteen parts called *ounces;* and an ounce is divided into halves and quarters. Shopkeepers who sell tea, and sugar, and other articles, make use of these weights.

Liquid substances are measured by quantity. The most common measures of quantity are *gallons*, *quarts*, and *pints*. There are two pints in one quart, and four quarts in one gallon.

ART OF WRITING—BOOKS.

Writing is the art of making certain marks to signify spoken language. The marks which we use are the letters of the alphabet; letters are selected according to their sounds, and joined together to form *syllables*, and syllables form *words*. Some small words, as *of*, *to*, and *from*, are only of one syllable, but longer words are of two or more syllables; the word *re-mem-ber* has three syllables. The joining of the proper letters in words is called *spelling*. A number of words together form a *sentence*. We know how to employ proper words in writing or speaking, by having learned the rules of *grammar*.

The rules of grammar should be learned by young persons at school, so that they may know how to write and speak correctly when they grow up. If we be ignorant of the art of spelling words rightly, and of using the proper words in speaking, we shall be thought very meanly of. It will be said of us that our education has been neglected. None but uneducated persons say *We was*, *I knows it*, or *It was me did it*. A rightly educated person, who is acquainted with the rules of grammar, says, *We were*, *I know it*, and *It was I who did it*.

In order to write language correctly, we must also know how to put *points* after the words. This is called *punctuation*. Points are small dots or marks placed at proper situations between words and at the end of sentences, to prevent confusion in the language, and to show where we should make pauses in reading. The most common points are small marks called *commas*, which are put after the smaller divisions of sentences. This is a comma , which is a dot with a tail to it.

The points put between larger divisions of a sentence

are called *semicolons*. A semicolon is a comma with a dot above it, thus ; The points put at the end of sentences are called *periods*. They signify that a full stop is made. A period is a single dot, thus . There are a few other points, but they are not much used. One is called a *mark of interrogation*, and it is always put after the words asking a question. This is its shape ? Another point is called a *mark of admiration*, and is always put after words expressing surprise. It is a dot with a long mark above it, thus ! The *hyphen* is a small mark, thus - which is used for joining two words together, or at the ends of lines when words are halved.

In the course of writing, when any thing has to be said not immediately connected with the subject, but which it is of use to notice (as when a person in the course of conversation turns aside to say a few words to another person), this may be done in two ways. *First*, The thing that is to be said may be inserted in the writing within marks called *parentheses*, thus ( ) Sometimes a *dash*, thus — is used instead of a parenthesis, and also instead of a comma. *Second*, The thing that is to be said may be written at the bottom of the page in a note, with a mark referring to the note. There are many kinds of marks of reference to notes; the most common is a *star*, thus * and a *dagger*, thus † When we come to any mark of this kind in reading, we stop, and read the note at the bottom of the page to which it refers. Notes are usually explanations of circumstances connected with the subject, and are in smaller letters.

Writing is of great service to mankind. It enables a person to mark down his thoughts on any subject, so that they may be preserved in books, or sent to another person to be read at a great distance. By this means, thoughts are handed down safely from one generation to another, and communicated from one place to another all over the world. A person who can write has it in his power to tell another friend what he is doing, or what he wishes to be done, although that friend be situated thousands of miles distant.

Writing is usually executed with ink and a pen upon paper. The letters of the alphabet which are employed in writing, differ in shape from the letters which are used in books. The following are the letters used in writing or penmanship:—

CAPITALS.

A B C D E F G H I J
K L M N O P Q R S
T U V W X Y Z.

SMALL LETTERS.

a b c d e f g h i j k l m n o p q
r s t u v w x y z.

By using these sloping letters, and making them join each other in words, writing is quickly performed, the right hand holding the pen.* Letters from one person to another are written in this manner in small writing. A specimen is given in next page, of a letter which was written from a boy at a school in the country to his mother in town. He is here seen writing his letter at a desk.

* This writing alphabet is presented simply with the view of exciting in the pupil's mind an idea of the nature of penmanship, and may be passed over in teaching.

Millburn, September 5, 1838.

My Dear Mother,

It gives me much pleasure to inform you that I arrived safely by the Coach at Millburn, and am now quite well. My master was glad to see me on my return to school, and he has been so well satisfied with my progress in reading and writing, that he says he will put me into a higher class, to learn some of the useful Sciences. I know that this will delight you, but it will delight my uncle William much more, for he told me that every boy should get a knowledge of science at school, and he hoped that I would pay attention to what my teacher said on the subject. I beg to offer my kind love to my dear sister Mary, and remain, dear Mother,

Your affectionate Son,

Robert Harley.

When a person writes his name at the bottom of a letter or paper, it is called *subscribing* his name. After a letter is folded and sealed, the name and place of residence of the person to whom it is written are put on the back. This is called the *address*. The letter is then put into the post-office, to be sent according to its address or direction.

Writing is sometimes done with *pencils* made of black lead, but the writing that is done with them is easily rubbed out with India-rubber, and therefore the writing is very imperfect. Writing may also be done with a piece of slate-pencil on a slate. Writing is most usually done on *paper*. In ancient times, people wrote upon the smoothed skins of sheep, also on the thin bark of trees, and on the large leaves of plants.

The art of making paper became known about six hundred years ago, and since that time paper has always been used for writing upon; it is a fine smooth white substance, much superior to skins, the bark of trees, or leaves of plants. Paper is made from old rags of linen and cotton. These are cut and bruised down into a stuff like powder, mixed with a glutinous liquid, and spread out into large thin sheets. The sheets, on being pressed smooth and dried, form paper. Paper is now made in great quantities in England, Scotland, and other countries.

A sheet of paper is folded so as to form a number of leaves; and one side of a leaf is a page. A collection of leaves, bound together, form a *volume* or a *book;* and a collection of books of various kinds form a *library*.

Some volumes are large and others small, according to the number of leaves into which the sheets have been folded. When the sheet has been folded into four leaves, the book is called a *quarto*, from the Latin word signifying four. When the sheet has been folded into eight leaves, it is called an *octavo*, from the Latin word for eight. And when the sheet has been folded into twelve leaves, it is called a *duodecimo*, from the

Latin word for twelve. Sheets are often folded into eighteen leaves, or into twenty-four leaves, and in these cases the books are of a small size.

ART OF PRINTING—LITERATURE.

In ancient times, learned men wrote what they had to say on any subject in a book made of the leaves of plants sewed together, and other persons copied these books by writing, so as to make a number of copies of one thing. All books were written with so much labour, and loss of time, that they were very scarce, and so very dear that none but the rich could purchase them. A single copy of the Bible in these times was sold for as much as four hundred pounds. This slow and dear way of preparing books continued till the art of *printing* was invented, about the year 1437; that is, upwards of four hundred years since. Printing was invented by a person called John Guttenberg, a German, who lived in the town of Mayence in Germany, and from that place a knowledge of the art of printing soon spread into England and other countries.

Printing is done by means of *types* and a printing-press. Types are small objects, made chiefly of lead, and are about an inch in length. For every letter in the alphabet, large and small, there is a particular type, with that letter shaped on one end of it, so that, with this shaped end, the letter can be stamped on a piece of paper.

A representation is here given of the letter s. Types are arranged in divisions or boxes in a case, each box having a number of its own letter in it; and when printing is to be performed, a letter is taken from one box and a letter from another, till words are formed by the types, and these words are made to stand close together in lines. In this way, whole pages are put up in types.

Here is a view of a small page of types tied together with a piece of string, and standing on a board.

After the types are put up in pages, they are laid on a flat surface in a printing-press, and thinly covered with ink, by means of a soft roller. A sheet of paper is now laid upon them, and the press being pulled hard on the back of the sheet, an impression is made. Another is made in the same manner, and so on, till many hundreds are printed. After all the sheets have been printed on one side, they are printed on the other, and this finishes the work.

Here is a picture showing a man working at a printing-press. After all the printing of a sheet is done, the

types are put back into their boxes, and are again set up in new pages, which are printed in the same manner. In this quick and simple manner, books of all kinds are printed, sheet after sheet, at a very cheap price. Instead of a Bible selling for four hundred pounds, as it did before the invention of printing, it is now sold for three shillings, by which means very poor persons can now afford to buy one to read.

The persons who write the matter that is to be printed in books, receive the name of *authors*. The writings of an author, after having been printed, are called the author's works, or his productions. The persons who carry on the business of printing, are called *printers*. After the sheets of a book are printed and folded, they are sewed together, and bound in boards to keep them firm; and the persons who bind books are termed *book-binders*. As soon as the books are bound, they are taken to shops, and sold by *booksellers*.

There are two kinds of writing for books—*prose* and *poetry*. Most books are written in prose. Prose consists of words forming lines completely across the page, and the lines follow each other, as in the present book, from the top to the bottom of the pages. A number of lines together, forming a division of the subject, make a *paragraph*.

Poetry is writing in *verse*, and the language is of a refined description, often referring to things of an imaginary character. In verse, each line has a certain number of syllables, generally eight or ten, and each line begins with a capital letter. A piece of composition in poetry is termed a *poem*, and the writer of such pieces is called a *poet*. All songs, hymns, and psalms, are in poetry. In many cases, the last words in the lines of poetry are of the same sounds, or *rhyme* with each other. I can point out the words which rhyme with each other in the poems in this book.

All printing in books, whether in prose or poetry, is now done in words composed of letters of the *Roman* alphabet. It is called Roman, because it was invented

by the Romans, a people in times long past. Sometimes a word is printed in letters of the *Italic* alphabet; when this is done, it is meant that the word is of importance, or requires particular attention from the reader. It is not considered a good style of writing to make many words in italic, or to have many notes. The plainest and most easily understood writing is the best.

Occasionally, on the title-pages of books, and in ornamental writing, letters are used from the *German* alphabet, which is so called from being the alphabet with which books are printed by the Germans. The following is the German alphabet:—

CAPITALS.

𝔄 𝔅 ℭ 𝔇 𝔈 𝔉 𝔊 ℌ ℑ 𝔍 𝔎 𝔏 𝔐 𝔑 𝔒 𝔓 𝔔
ℜ 𝔖 𝔗 𝔘 𝔙 𝔚 𝔛 𝔜 ℨ.

SMALL LETTERS.

𝔞 𝔟 𝔠 𝔡 𝔢 𝔣 𝔤 𝔥 𝔦 𝔧 𝔨 𝔩 𝔪 𝔫 𝔬 𝔭 𝔮 𝔯 𝔰 𝔱 𝔲 𝔳 𝔴 𝔵 𝔶 𝔷.

The Lord's Prayer.

Our Father which art in Heaven. Hallowed be thy Name. Thy kingdom come. Thy will be done in Earth, as it is in Heaven. Give us this day our daily bread; And forgive us our trespasses, as we forgive them that trespass against us. And lead us not into temptation; But deliver us from evil; For thine is the Kingdom, the power, and the glory, For ever and ever. Amen.

In writing and printing the English language, certain contractions of words, and also some small words from the Latin, are used. A common contraction is the figure &, which signifies *et* or *and*, et being the Latin word for *and*. When a small letter c is put after the figure, thus, &c., it signifies *et cetera*, which means *and the rest*, cetera being the Latin word for *the rest*. It is often put at the end of lists of things, to signify that there are some more things of the same description, which it is not necessary to enumerate.

Ditto, or its abbreviation *do.*, is used to signify *the same*, that being its meaning in the Italian language. *Ibid.* or *ib.* are contractions of the Latin word *Ibidem*, which also signifies *the same*. *Viz.* is a contraction of *Videlicet*, which, as commonly used, signifies *namely*, and it is read as the word *namely*, when it occurs in a book. *Vide* is a word in Latin signifying *See*, and in that sense it is occasionally used in referring to things which may be seen in a particular page or book. At the end of books, the word FINIS is sometimes put: it signifies *The End*, that being its meaning in Latin.

All books whatsoever form what is called Literature, being so styled from the Latin word *litera*, a letter. The books in the English language are termed *English Literature;* books in the French language, *French Literature;* and so on with the books in other languages. Works in the Latin and Greek tongues are styled *Classical Literature*, because they have been long held in estimation in the studies of classes in schools. Any person who is fond of reading, and of deriving amusement and instruction from books, is said to have a taste for literature, or is fond of literary recreations.

It is a mark of intelligence to feel pleasure in the pursuits of literature, for books contain large stores of information on all subjects; and from them we may draw the best advices or counsels for our guidance. It is only by the study of good books, along with our own experience in life, that our minds can be either instructed or improved.

COUNTING—NUMERALS.

Counting is useful for telling the number of things, or how much money any thing costs. The common way of counting is by words, as, when a boy counts his fingers, and says—*one, two, three, four, five, six, seven, eight, nine, ten.* But when people write the number of any thing in a book or on a slate, they adopt a shorter method than writing the words; they generally mark down *figures* instead of words, because a single figure can express a whole word, or even several words.

There are only ten figures altogether. Here they are with their names beneath them,

1 2 3 4 5 6 7 8 9 0
one, two, three, four, five, six, seven, eight, nine, nothing.

All numbers, no matter how great, are written down by these figures alone, in the same manner that all words are written, by joining the letters of the alphabet.

The last figure 0, is usually called *nothing* or *nought*, and it is also called a *cipher*, because, when it stands by itself, it means nothing, or no number at all. But when we put it after 1, thus, 10, we make ten; when put after 2, we make twenty; the cipher is thus put after other figures to make them mean large numbers. When two ciphers are put after 1, as 100, it means a hundred; and when three ciphers after 1, as 1000, it means a thousand.

The numbers 1, 3, 5, 7, 9, 11, 13, and so on, are called *odd* numbers; and 2, 4, 6, 8, 10, 12, and so on, are called *even* numbers.

The following is the manner of counting in figures and words:—

1 one	35 thirty-five	69 sixty-nine
2 two	36 thirty-six	70 seventy
3 three	37 thirty-seven	71 seventy-one
4 four	38 thirty-eight	72 seventy-two
5 five	39 thirty-nine	73 seventy-three
6 six	40 forty	74 seventy-four
7 seven	41 forty-one	75 seventy-five
8 eight	42 forty-two	76 seventy-six
9 nine	43 forty-three	77 seventy-seven
10 ten	44 forty-four	78 seventy-eight
11 eleven	45 forty-five	79 seventy-nine
12 twelve	46 forty-six	80 eighty
13 thirteen	47 forty-seven	81 eighty-one
14 fourteen	48 forty-eight	82 eighty-two
15 fifteen	49 forty-nine	83 eighty-three
16 sixteen	50 fifty	84 eighty-four
17 seventeen	51 fifty-one	85 eighty-five
18 eighteen	52 fifty-two	86 eighty-six
19 nineteen	53 fifty-three	87 eighty-seven
20 twenty	54 fifty-four	88 eighty-eight
21 twenty-one	55 fifty-five	89 eighty-nine
22 twenty-two	56 fifty-six	90 ninety
23 twenty-three	57 fifty-seven	91 ninety-one
24 twenty-four	58 fifty-eight	92 ninety-two
25 twenty-five	59 fifty-nine	93 ninety-three
26 twenty-six	60 sixty	94 ninety-four
27 twenty-seven	61 sixty-one	95 ninety-five
28 twenty-eight	62 sixty-two	96 ninety-six
29 twenty-nine	63 sixty-three	97 ninety-seven
30 thirty	64 sixty-four	98 ninety-eight
31 thirty-one	65 sixty-five	99 ninety-nine
32 thirty-two	66 sixty-six	100 one hundred
33 thirty-three	67 sixty-seven	101 one hundred and one
34 thirty-four	68 sixty-eight	

1000 one thousand, 10,000 ten thousand, 100,000 hundred thousand, 500,000 five hundred thousand, 1,000,000 one million. The year eighteen hundred and thirty-eight is thus written, 1838.

The number which distinguishes a king of a certain name, is generally written in Roman numerals, as Henry VIII. for Henry the Eighth. This means that there were seven kings called Henry before this Henry the Eighth.

The Latin word for *Number* is *Numero*, and it is common to use the contraction *No.* when marking the Number of any thing. For example, No. 37 signifies Numero 37, or Number 37.

TIME.

Every young person knows what the *morning* is; it is the time when we rise from bed and put on our clothes, and when the sun begins to shine. Every one also knows when it is *night;* it is the time when we go to bed, and when the light of the sun leaves us, and it is dark. From one morning till next morning is a *day.*

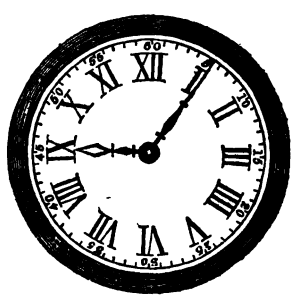
The whole time of a day has, first, the *morning;* then the *forenoon;* then *noon;* after which are the *afternoon, evening,* and *night.* People rise in the morning and take breakfast; from the forenoon till the afternoon they work and walk about; in the afternoon they take dinner; then they work again or amuse themselves till the evening; at night, they take supper, and go to bed, where they sleep till morning. At certain seasons, darkness comes on early in the evenings; and as it is then too soon to go to bed, *candles* and *lamps* are lighted, to give us light to see to work, or to read, or to do any thing else that we may choose.

Days are divided into *hours.* In every day there are twenty-four hours. Every hour is divided into sixty *minutes,* and every minute is divided into sixty *moments* or *seconds.* The hours of the day are counted from one in the morning till twelve at noon, which is the middle of the day, when the sun is highest. Then after twelve at noon is past, we begin to count from one to twelve

over again. And when this twelve is past at midnight, we go on counting from one in the morning, as before. Mid-day, or twelve at noon, is called *meridiem*, and all the hours after it to twelve at night are called *post meridiem*, or are marked *p. m.*, which means *after mid-day*. All the hours from one in the morning till noon, are called *ante meridiem*, or are marked *a. m.*, which means *before mid-day*.

It is of great use to measure the hours of the day, so that people may always know exactly what hour and minute it is, and do things at proper times. In order that hours may be properly measured, *clocks* and *watches* have been invented. Clocks and watches are very curious machines, which measure time exactly; and they have dials, or faces, with hands on them which point to the hours and minutes. Every boy and girl should learn to know the hour of the day by looking at a clock or watch, and then they will know when to go to school without asking any one to tell them the hour.

Here is a picture of the dial of a watch, with the hours marked round it, from I to XII; also, the minutes of



an hour marked outside from 1 to 60. You likewise see two hands, one short and the other long. The short hand is for pointing out the hours, and is called the *hour-hand*; the long hand is for pointing out the minutes, and is called the *minute-hand*. The minute-hand goes round once

every hour, but the hour-hand goes much more slowly, or only from the mark of one hour to another in the space of an hour. When the hour-hand points to XII, it means twelve o'clock; when it points to I, one o'clock, and so on with the other hours. After seeing where the hour-hand points to, look where the minute-hand points, and there the number of minutes after the hour is marked. In the picture here given, the hour-hand points to IX, and the minute-hand to 5, which signifies that it is five minutes after nine. When the minute-hand goes to 10, it will be ten minutes after nine; at 15, it will be fifteen minutes or a quarter of an hour after nine, and so on according to the marks; at 30, it is half an hour after. When the minute-hand comes round to where 45 is marked, it is called a quarter to ten; at 50, it is ten minutes to ten; at 55, it is five minutes to ten. And when the minute-hand is at 60, the hour-hand has got to X, which shows that it is ten o'clock exactly. All the other hours of the day are known in the same manner, by looking at watches and clocks.*

After young people have learned how to know the hours of the day, then they learn about weeks, months, and years. A *week* is seven days—Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. Sunday is the first day of the week, and it is called the *Sabbath day*, because it is the day of rest. We must not do any work on the Sabbath day, but we may work all the other days of the week. Four weeks make a lunar month.

Fifty-two weeks, or 365 days, make a *year*. There are twelve calendar months in a year—January, February, March, April, May, June, July, August, September, October, November, and December. The first day of January is the first day of the year, and it is called *New Year's Day*. The months have not all the same number of days. Some have 30, and others have 31; February has only 28 days, but in every fourth year, which is *leap*

* A watch can here be exhibited, and its movements explained, as far as suitable to the capacity of the pupil.

year, it has 29. The best way to remember the number of days in the months is to learn the following rhyme:—

Thirty days have September,
April, June, and November;
All the rest have thirty-one,
But February, twenty-eight alone;
Excepting leap year, once in four,
Which gives to February one day more.

There are four *Seasons* in a year, Spring, Summer, Autumn, and Winter, each of three months in length. The months of Spring are February, March, and April; the months of Summer are May, June, and July; the months of Autumn are August, September, and October; and the months of Winter are November, December, and January.

After one year is past, another begins, with the same number of months and days over again; and thus years have followed years from the beginning of the world. Mankind reckon the number of years from great events. In our country, and also in other countries, years are reckoned from the birth of Christ, which is called the *Christian era*. Every hundred years from the beginning of this era is called a *century*. Eighteen centuries have already been completed, and we now live in the *nineteenth century*. When we write the year 1838, or 1839, or 1840, it is meant that so many years have elapsed since the birth of Christ.

The precise time at which any event occurs, is its *date*. When people write dates, they mark the name of the place they are writing in, also the name of the month and day of the month, and the number of the year. Thus, *London, August* 1, 1838, means that the writing was done at London on the first day of August, in the year 1838. Sometimes the date of the year has the letters A. D. before it. These letters are a contraction of the words ANNO DOMINI, which signify THE YEAR OF OUR LORD.

BUYING AND SELLING—MONEY.

Those persons who have many things, *sell* them to others who want to *buy* them. People buy things with *money*. If there were no money, people would have to *exchange* one kind of articles for another, which would be very inconvenient.

Money is small pieces of metal, made into *coins*. There are three kinds of metal used for money; these are gold, silver, and copper. These metals have been chosen to make money with, because they are scarce and difficult to be got. Gold and silver are called the *precious metals*, because they are precious or valuable from their scarcity.

The only person who is at liberty to coin money, is the king. But the king does not make the coins with his own hands; he has servants who make them for him in a place called the Mint. The king, also, does not become rich by making coins, because he has to buy the metals to make them with. These metals are very dear, and are brought from foreign countries.

Coins are made by stamping on them, with great force, certain words and figures. These words and figures are for telling in what king's reign the coins are issued. One of the most common figures is the likeness of the head of the king.

Every country has coins of a different kind. The coins in this country are *pennies*, *halfpence*, and *farthings*, which are made of copper; *groats*, *sixpences*, *shillings*, *half-crowns*, and *crowns*, made of silver; and *half sovereigns*, and *sovereigns*, made of gold.

2 farthings are equal to 1 halfpenny.
2 halfpence are equal to 1 penny.
4 pence are equal to 1 groat.
12 pence are equal to 1 shilling.
2 shillings and 6 pence are equal to 1 half-crown.
2 half-crowns are equal to 1 crown.
20 shillings are equal to 1 sovereign or 1 pound.

In writing down sums of money, the letter *d* stands for pence, *s* or a long stroke / for shillings, and £ for pounds. Thus, £1, 17s. 6d. means *one pound seventeen shillings and sixpence.*

A penny-piece of copper is much larger than a shilling, but is only a twelfth of the value. The reason for this is, that copper is much more plentiful than silver. It can be bought in lumps at a much cheaper price. Gold is the least plentiful of all, and is so difficult to be got, that one sovereign is as valuable as twenty shillings, or two hundred and forty pence. Some boys and girls wish that pennies were so plentiful that they could gather them like stones, and fill their pockets with them; but if pennies were so plentiful, they would not be worth any thing. Every body could get as many as they liked for nothing, and therefore no one would sell things for them. This shows that it is only by the scarcity of money that it is of any value.

Notes made of paper are sometimes taken in place of coins. This is done only when coins are difficult to be got, or to save the trouble of taking coins, which are heavy in carrying from place to place. These notes have certain words written upon them that signify what is their value, and that the value in coins will be given for them when they are brought to the persons who issued them. The persons who issue these notes, and take care of money for people, are called *bankers*.

PROPERTY—LABOUR.

All the things that we see around us, belong to somebody; and these things have been got by *labour* or *working*. It has been by labour that every article has been procured. If nobody had ever done any labour, there would have been no houses, no cultivated fields, no bread to eat, no clothes to wear, no books to read, and the whole world would have been in a poor and wild state, not fit for human beings to live happily in.

Men possess all things, in consequence of some person having wrought for these things. Some men are rich, and have many things, although they never wrought much for them; but the ancestors, or fathers and grandfathers, of these men, wrought hard for the things, and have left them to their children. But all young persons must not think that they will get things given to them in this way; all except a very few must work diligently when they grow up, to get things for themselves.

After any one has wrought to make a thing, or after he has a thing given to him, that thing is his own, and no person must take it from him. If a boy get a piece of clay, and make the clay into a small ball or marble to play with, then he has laboured or wrought for it, and no other boy has any right to take it from him. The marble is the *property* of the boy who made it. Some boys are fond of keeping rabbits. If a boy have a pair of these animals, they are his property; and if he gather food for them, and take care of them till they have young ones, then the young rabbits are his property also. He would not like to find that some bad boy wished to take his rabbits from him. He would say to the bad boy, "I claim these rabbits as my property; they are mine. You never wrought for them; they are not yours." And if the bad boy still would take the rabbits, then the owner would go to a magistrate, and tell him of the bad boy's conduct, and the bad boy would be punished.

All things are the property of some persons, and these persons claim their property in the same way that the boy claims the marble that he has made, or the rabbits that he has reared. It is very just and proper that every person should be allowed to keep his own property; because, when a poor man knows that he can get property by working for it, and that no one dares to take it from him, then he will work to have things for his own use. If he knew that things would be taken from him, then he would not work at all. He would spend all his days in idleness, and live very poorly.

Some persons possess lands and houses as their property, and are called *landlords* or *proprietors*. As these persons cannot always make use of their lands and houses themselves, they *lend* or let them to *tenants*, who pay a *rent* for occupying them for a certain length of time. Rents are usually paid to landlords at the end of every half year or every quarter. Some persons pay a rent weekly for their *lodging* in a house.

When one person wishes to have a thing which belongs to another, he must ask permission to take it, or he must offer to buy it; he must never on any account take the thing secretly, or by violence, or by fraud, for that would be *stealing*, and he would be a *thief*. God has said, "Thou shalt not steal;" and every one should keep his hands from picking and stealing. Some boys think, that, because they *find* things that are lost, they may keep these things to themselves. But the thing that is found is the property of the loser, and should be immediately restored to him without reward; it is stealing, to keep it.

God has given some things to mankind which are the *common property* of all. The pure air which we breathe, the light which shines from the sun, and lets us see all things about us, and the water of rivers, and of the sea, are the chief things which have been given us freely to enjoy. If we would have other things, we must make them by our industry from the materials of the earth, which have been provided for us.

PROFESSIONS AND TRADES.

People live by working for money to get food, clothes, houses, and all the other things which they need or would like to have. If they did not work, all the food that has already been produced would soon be eaten up, all the clothes would be worn out, and every thing else would decay, so that the inhabitants of towns, and also those of the country, would be starved, and die very miserably.

The necessity for each person working at some kind of honest labour, is an obligation laid on us by the Creator, and it is a sin to live in idleness, without a desire to work. We are also far more happy when we are working than when we are idle; and this in itself ought to cause us to follow a course of active industry.

As children are not able to work, they are supported for a number of years by their parents; but, when they grow up, they are expected to go and work for themselves. Some young persons are so ignorant, or have such bad dispositions, that they think it would be pleasant for them to live always by their parents or others working for them, and so remain idle all their days. They do not seem to care how much they take from their fathers or their mothers, who are sometimes so greatly distressed with the conduct of their children, that they die of grief. This is very cruel and sinful conduct of these young persons, which no boy or girl should imitate. It is the duty of all who have health and strength, to labour for their own support.

In this large world there is room for all persons living and working at some kind of useful employment. Some are strong in body, and are fitted for working at toilsome professions; others are less strong in body, but have active minds, and they are suited for professions in which little bodily labour is required. Thus, every young per-

son chooses the profession for which he is fitted, or which he can conveniently follow. Young persons cannot in all cases follow the business they would like; both boys and girls must often do just as their friends advise them, and then trust to their own industry.

As some choose to be one profession and some another, every profession, no matter what it be, has some persons following it as a means of living, and all assisting each other. The tailor makes clothes, the shoemaker makes shoes, the mason builds houses, the carpenter makes furniture, the printer prints books, the butcher kills animals for food, the farmer raises grain from the fields, the miller grinds the grain into flour, and the baker bakes the flour into bread. Although all these persons follow different trades, they still assist each other. The tailor makes clothes for all the others, and gets some of their things in return. The shoemaker makes shoes for all the others, and in the same manner gets some of their things in return; and, in the same manner, all the rest exchange their articles with each other. The exchange is not made in the articles themselves, for that would not be convenient; the exchange is made by means of money, which is to the same purpose.

Tailors, shoemakers, carpenters, and others who make articles for use, are *mechanics* or *artizans*, and they form a very large body of the people. The persons who employ a great number of artizans, and give them *wages* for their labour, are *manufacturers*, and these sell the articles they make to *shopkeepers*, who sell them to the public or whoever will buy them. When shopkeepers sell an article, they get a little more for it than they paid for it, and that is called their *profit*. If the bookseller pays fivepence for a book, and sells it for sixpence, then he has a penny of profit. If manufacturers and shopkeepers did not get profit on their articles, they could not sell them, for it is only the profit that they live upon.

The articles or goods made by manufacturers are often bought by *merchants*, who send them for sale to foreign countries, where they are scarce, and where the people

wish to buy them. Goods are thus sent to places thousands of miles distant across the sea in ships; and the ships bring back articles from these places which cannot be got at home. The tea, sugar, and many other articles which we daily use, are in this manner brought from far distant countries. The intercourse which takes place between the merchants of different countries and places, in the buying and selling of goods, is called *commerce* or *trade*.

A city where much merchandise is produced, is termed a *manufacturing* city. A city where much commerce is carried on, is called a *commercial* city. Manchester, Birmingham, and Sheffield, are great manufacturing cities. London and Liverpool are great commercial cities. Glasgow is both a manufacturing and commercial city. Commercial cities are usually situated on navigable rivers, or on the shore of the sea, in order that ships may sail up to them, and transport the goods that the merchants have for sale. The buildings where goods are stored up, are called *warehouses*.

Many persons in society are usefully employed in instructing, amusing, or taking care of others. Schoolmasters instruct youth in schools, and tutors and governesses give instructions in private families. Clergymen instruct the people in their religious duties, and endeavour to persuade them to lead a good life. Authors of books, editors of newspapers, musicians, painters of pictures, and others, delight and amuse their fellow-creatures, and keep them from wearying in their hours of leisure. Physicians cure people of their illnesses, and surgeons heal wounds.

All persons are expected to be in some way useful to their fellow-creatures. Some people, both young and old, are lazy or idle, and will not work at regular employment, and others spend improperly the most of the money which they earn. All these fall into a state of wretchedness and poverty. They become *poor*, and are a burden on society. Other persons are unfortunate in their business, and lose all that they have made, so that they become poor also. Persons who suffer hardships of this kind should

be pitied, and treated with kindness by those who are able to help them. Many persons, besides, become poor by old age and infirmity, and it is proper that they should be taken care of and supported. A *beggar* is a poor person who does not feel ashamed to seek alms. Any one who is able to labour for a subsistence, should feel ashamed either to beg or to be classed among the poor.

God has taken care that the *wants* of all persons who labour and lead a regular life shall be satisfied. These wants are few in number, and consist chiefly of *air*, *food*, *water*, *warmth*, and *clothing*. Some of these we receive freely, but others we receive only by working for them. Some persons are contented if they can work for the bare *necessaries* of life. If they can get only as much plain food and coarse clothing as will keep them alive, they are contented. If a person cannot, by all his industry, earn more than the bare necessaries of life, it is right to be contented; but if he can easily earn money to buy comfortable food, comfortable clothing, and other means of comfort and rational enjoyment, it is wrong to be contented with the bare necessaries of life.

It is the duty of every one to try to better his condition by skill and industry in any kind of lawful employment. Let him only take care to abstain from indulgence in vicious luxuries. One of the most vicious of luxuries is *spirits* or liquors, which some people drink to make themselves intoxicated or drunk. When a person is in this debased condition, his senses and intellect are gone, and he does not know what he is doing. He cannot walk, but staggers or rolls on the ground, and is a horrid spectacle to all who see him. Drunkenness is an odious vice, which leads to great misery and poverty, and the best way to avoid falling into it, is to abstain from tasting or using any spirits or intoxicating liquors.

OF CIVIL GOVERNMENT—EMBLEMS—AND RANKS.

The people who live in a country, form a nation. We belong to the British nation, or the United Kingdom of Great Britain and Ireland. There are two kinds of nations—those which are *barbarous*, and those which are *civilised*. In barbarous nations, the people have not comfortable houses, food, or clothing, and they live almost like beasts of the field. In civilised nations, there is a regular form of government; there are comfortable houses, and well-built towns; there are trades, commerce, and an abundance of every thing that can make life agreeable; the lands are well cultivated; and there are churches, schools, hospitals for the poor, and other valuable institutions. We live in a civilised country.

A regular form of government signifies a power which rules and directs the nation for the benefit of all. If there were no regular ruling power in a country, ignorant and evil-disposed persons would injure those who wished to live peacefully. Some are so wicked that they would take things from others by violence, in the same way that a large and strong dog will take a bone from a small and weak dog. It is the duty of a ruling power or government to prevent such wickedness.

A ruling power is also necessary, to prevent the public affairs of the people from falling into disorder. The ruling power directs what is to be done. If the people of one nation wish to communicate with the people of another nation about some matter of importance, it is the governments of the two nations that conduct and manage the communication.

Governments are of very different kinds. In some countries, one man is the ruler or sovereign, with the title of *king*. This is called a *monarchy*. In other

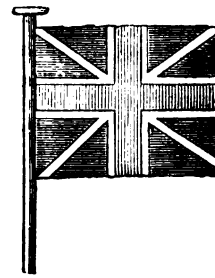
countries, besides a king, there is also a body of men appointed by the people, to help in making the laws, and to check or control the acts of the king. This is called in Britain a *parliament*, and in other countries it passes by different names. The monarchy is then said to be a *limited* one. The government of Great Britain is a limited monarchy. In a few countries, instead of a king, who at his death leaves his title to his son, there is a *president*, who is chosen by the people, and rules only a short time. In such governments there is also a body like a parliament, to help in making the laws, and to check the president. These governments are called *republics*. The United States of North America form a republic.

Whatever be the manner in which the ruling power is settled, it is the duty of that power to make *laws* to govern society, and to appoint courts of justice and magistrates to put the laws in force. It is the duty of every one to obey the laws, and to give respect to magistrates, who are appointed for our protection. In this way we shall live happily, and be at peace with all our neighbours.

Governments employ military, or armies of soldiers, to protect their country from the attacks of other nations, and to assist in keeping the laws from being broken. They also employ a navy, or ships with sailors, to execute their will in distant parts of the world. When a nation has its army and navy engaged in fighting with the army and navy of another nation, it is said to be at *war*. When a nation is not at war, it is at *peace*, and peace is the time of greatest happiness for the people.

Both nations and individuals are fond of using certain emblems or signs by which they may be known or distinguished. These are called heraldic emblems, because they are according to the rules of *heraldry*, which is a science for regulating the use of devices of this nature. The army and navy of every nation carry a particular kind of emblem, by which they may be readily distinguished. The emblem which they carry is a *flag*. A flag

is a large piece of cloth, coloured and marked, and hung at the top of a staff or pole. Here is a representation of the British flag.



When this flag is seen flying on a ship, castle, or place of any kind, it is at once known that that ship, castle, or place, belongs to the British government. Thus, every nation has its own flag, which it uses when necessary. Flags are usually called warlike emblems, because they are employed principally in matters connected with war.

Nations have likewise emblems which are used for peaceful and ornamental purposes, and which the people come to look upon with feelings of pride and pleasure. Thus, the common emblem of England is a *rose*, that of Scotland is a *thistle*, and that of Ireland is a *sprig of trefoil* or shamrock. These three are frequently seen painted or drawn in one group, like a bouquet of flowers, and are intended to represent the union of England, Scotland, and Ireland, in one government.

Certain families and individuals, for the sake of distinction, use emblematic devices, called arms, or *coats of arms*. These arms consist of various devices, such as

representations of crowns, shields, animals, men, and other objects, arranged in a particular manner, according to the rules of heraldry. Here is a representation of the arms of the king of England.

Coats of arms are used chiefly by persons of high rank. In our country, and also in many other countries, there are persons who have titles of honour and are of a higher rank than others; all which distinctions have been given by the sovereign as rewards for merit, or for some other important cause. Persons who enjoy these honours are called *noblemen*, or *nobility*, and their titles are according to their degree of rank—*dukes*, *marquisses*, *viscounts*, *earls*, and *barons* or *lords*.

Baronets and *knights* are of a rank below the nobility. After them is the class of persons usually called *gentlemen;* but it is difficult to say who belongs or who does not belong to this large class. Every man who conducts himself according to the rules for good manners, is deemed a gentleman. It may depend on the behaviour and disposition of young persons, whether they will be admitted into society under this character.

Rank and title are not sure to confer happiness; a person in humble circumstances may be as happy as those whose lot it is to possess the highest distinctions.

He that is down, need fear no fall,
  He that is low, no pride;
He that is humble ever shall
  Have God to be his guide.

SOCIAL ARRANGEMENTS.

In every civilised country, the people or inhabitants live in a *social condition*, or in an *organised society*. This means that the whole people conduct themselves according to regular laws; respect the rights, life, and property of each other, and all live in their appointed stations, in the exercise of acts of politeness and kindness. All this is much better than if people lived in an *unsocial condition*, each hating and trying to injure his neighbour. A community can never thrive that has not a proper social organisation.

Many of the people of a country are connected with each other by relationship; they are *related* to each other. A boy or girl, for example, may have brothers and sisters, uncles, aunts, cousins, and other relatives, some of whom may be living in far distant places.

People are also connected with each other as *friends*, or as *acquaintances*. They feel pleasure in knowing and conversing with each other, and in keeping up a *correspondence* by means of letters. Many persons are, likewise, connected with each other in business.

The society which is formed in large towns and cities is more complete than the society in the country, where people live far apart from each other. In large towns and cities the inhabitants contrive many arrangements for their convenience and comfort. They cause the streets to be paved with flat stones for ease in walking, and they cause drains to be made to carry away all the rain and other water that would be injurious to health if it lay on the streets and became stagnant.

The streets are furnished with *gas lamps*, which burn at night, and give light to the passengers who are walking along the pavements. The gas which burns in the lamps is a kind of air, which is made from coal at gas-works, and is conveyed through the town in pipes laid below the ground

The houses are supplied with *fresh water*, which is brought to them, also, in pipes laid below the ground. The water flows into the pipes at a river or fountain at the distance of several miles in the country, and comes all the way to the town, where it is distributed in smaller pipes to the different houses. By this means, few of the inhabitants of large towns have to carry any water. The drawing of water from wells, and carrying it to houses, is very toilsome, and causes a great loss of time.

The streets of towns are guarded by *police officers* or watchmen. It is the duty of these men to seize evil doers and take them before magistrates, who send them to prison, where they are punished with confinement. It is a *disgrace* to be seized and put in prison for bad behaviour.

Towns are governed by a body of men called the *town-council*. These persons are elected by the inhabitants to manage the public affairs of the place, and to watch over its interests. The members of the town-council and magistrates are sometimes called the *public authorities*, and we are bound to yield respect to their lawful orders.

Towns contain *public buildings* and *private houses*. The public buildings are the churches or places of public worship; the hospitals for the sick and the poor; the prisons or jails for criminals; bridges, theatres, or places for public amusement; the schools or colleges where instruction is given to the young; houses for the courts of law; and all other buildings in which the people generally have an interest. Public buildings are often very elegantly built of polished stone.

Private houses are those in which private families dwell, and they usually stand close beside each other in rows, forming streets. The streets are distinguished from each other by names, as *High Street*, *Oxford Street*, or *George Street*. In some cases the rows of houses form squares, which are likewise distinguished by names, as *Portman Square*, *Charlotte Square*, or *James Square*. In order to distinguish the houses in streets from each other, each house is numbered. The number is marked in figures on the door, or at the side of the door.

A good dwelling-house ought to be dry, or free from damp; its staircase well lighted; its apartments spacious, airy, and exposed to the light of the sun; its roof strong; its chimnies capable of carrying up the smoke; and, to be healthy, it must be kept in the most cleanly condition.

Every dwelling-house has *furniture* of some kind. Furniture consists of beds, tables, chairs, carpets, grates and fire-irons, trunks, chests of drawers, clocks, window curtains, and many other articles. Carpenters, cabinet makers, upholsterers, blacksmiths, and other artizans, make the furniture of dwelling-houses.

Some houses have gardens and small greens connected with them, and some have stables for holding horses. *Stables* have neither windows nor chimnies, and they do not require furniture like that of a dwelling-house. Their furniture consists almost entirely of stalls for the horses standing in, and mangers from which they may eat their corn.

Large towns contain many shops and warehouses for the sale of different kinds of goods, and quantities of these goods are sent to villages and houses in the country by *carriers*, with carts and waggons drawn by horses. Carriers are a very useful class of men, and require to be well paid for the trouble they have in conveying merchandise from place to place.

Large and heavy goods are sometimes sent to distant places by boats on *canals*. Canals are channels of water resembling rivers; they have been made by digging the ground into the form of a long level trench or hollow, into which water has been put. Canal-boats are guided by a helm or rudder, like ships at sea, but they have no sails, and are usually drawn by horses.

In many towns *newspapers* are printed and published. A newspaper is a large sheet, very full of printed matter, which consists of *news*, or intelligence of events which have lately occurred in all parts of the world. The persons who conduct newspapers are called *editors*; they collect the news from distant quarters, and from every one who can tell them of any thing that has happened.

They then cause the matter to be put in types, and printed. Some newspapers are published every day, and some only once a-week. By reading a newspaper, we learn what has occurred in the town in which we live, and in distant places.

Towns are connected with each other by *roads*. Roads are of great use in going from one place to another. If there were no roads, we should have to walk across rough fields, and have great difficulty in going on our way. Roads are made with hard stones, and these being trodden upon and bruised, become smooth and pleasant for walking upon, or for the rolling of wheels. Some small roads are called *paths* or pathways; but large broad roads, which lead from one town to another, are called *highways*. A line of trees on each side of a path or road leading to a house, makes an *avenue*.

When we *travel* upon highways, we come to gates which are placed across the road. These gates are called *turnpike gates*, or *toll-bars*, because those who travel on horseback or in carriages, or who drive carts or waggons, have to pay a *toll* or small sum of money, for the liberty of going through the gateways. A man is placed to collect these sums, but he does not get the money for nothing. He pays a large sum of money every year to the persons who have the care of the roads, and these persons employ labourers to keep the roads in repair. The money paid as toll, therefore, is expended on the roads.

Persons who go on a journey for a great distance through countries, are called *travellers*. These travellers depart from their homes, and perhaps do not return for many days or weeks. Close by highways, as well as in cities, towns, and villages, there are houses where travellers may find food and lodging for their money. These houses are called *hotels* or *inns*, and those who occupy them receive the name of innkeepers.

As it is very tiresome to walk on foot in travelling, some persons go on horseback, or in coaches or gigs; but as few people have a horse, or a coach, or a gig of their own, many go in *stage-coaches*. These vehicles are for the use

of all who pay for them, and they can carry a number of persons at once. Travelling is also done in vehicles on railways. The distance which we go in a day is a *day's journey*.

FACULTIES AND EMOTIONS OF THE MIND.

I *know* that I am a human being, and have senses and intellect; that I can feel, move, wish, think, and speak. I know my name, the name of the place where I was born, the name of the country of which I am a native, and the name of the place where I now am. I know that I am a young person, and have many things to learn.

I can *comprehend* or *understand* what is said to me. If I be told by my master to stand up, I understand that he wishes me to rise from my seat. When any person asks me what is my name, I understand what is wanted; I tell my name. If my parents say to me, you must not go out to play to-day because it is wet, I understand that they wish me to stay in the house, and therefore do not go out. I can understand why a house has a door and windows, or why people should wear light clothing in summer and warm clothing in winter.

I can *reflect*, or *think*, on what I have seen, or what is said to me. I know by experience that fire burns. If any person should tell me to put my hand into the fire, I would reflect or think on what was said, and answer that I could not put my hand in the fire without having it burnt, and therefore would not do it, because burning was very painful and injurious. I can also reflect on the danger of going into deep water, where I might be drowned. I can reflect on advices which have been given to me. I can reflect on any question that is put to me before I answer it. I can reflect on the consequences of bad behaviour. If a coach were about to run over me, I should instantly reflect on my danger, and decide on going out of its way.

I can reflect on the reason for doing things, or the *design* in doing them. The eyes were designed to see and

the legs to walk; they fulfil this design. The design in sending me to school was that I should learn to read; if I do not learn to read, I do not fulfil the design. A boy went upon the ice to slide, but the ice was too thin and could not bear him, and so he sank and was drowned. The design of the boy was to slide, not to be drowned. The drowning was an accident, and was caused by the boy's imprudence in not reflecting. The word *intention* is often used for design.

I can understand what is meant by employing *means* to do a thing. If I wish to have my cap, which is hanging on a peg on the wall, I must employ means to get it; it will not come to me itself, because it is an inanimate object, and cannot move. The means I employ are my own legs in walking to it, and my own hands in taking it down. Builders reach the top of houses by means of ladders. Goods are carried from place to place by means of carts and horses. A girl sews by means of a needle and a thread. Children are supported by means of their parents working for them, and are taught by means of books and teachers.

I know what it is to *hope*, or to *expect*, that an event will take place. I can hope that, if my life be spared, I shall grow tall and strong, and be able to be useful among my fellow-creatures. I can hope that my friends will be pleased with my conduct. If I suffer any misfortune, I hope to be able to endure it with patience. If I be successful in life, I hope I shall not be vain or proud.

I know what is meant by *order* and *disorder*. Order is proper arrangement; disorder is improper arrangement. A row of books on a shelf stand in order, but a heap of books on the floor lie in disorder. If my hair be combed, it is in order; if it be not combed or brushed, it will be in a state of confusion or disorder. A company of soldiers stand in proper order in an even row. By this arrangement they can readily defend themselves and be active in their movements; if they stood in disorder like a mob, they could not properly defend themselves, and would be easily overcome.

I know what it is to feel the emotion of *fear* or dread. I fear to do evil; such as to lie, to steal, or to injure my neighbour. I have three reasons for fearing to do these things—I fear to incur the anger of God, I fear to lose my good character among men, and I fear the stings of my own *conscience*. There is something within me which feels unhappy or vexed when I have done any wrong. This thing which feels is my *conscience*. My conscience feels *remorse*. All fear of this kind is proper.

There is a wrong kind of fear, which I will try to despise. I mean the fear of things which are not worthy of fear. This is called a *false fear*, or false terror. Some persons feel a fear in going into a dark room at night, but I have no terror of this kind. I know that there is nothing in the dark which is not in the light. Darkness and lightness make no difference in things, either without the house or within. Some persons also are *afraid* to do what is right, for fear of being laughed at; but I hope I shall never feel any fear of this kind. I hope to be always able to do my duty in acting correctly, without any fear of what people will say or think.

Some persons boast of their *courage;* they say they have no fear in going into danger. It is wrong to boast of doing any thing, and it is still worse to boast of not fearing danger. Every one should be *cautious*, or feel *caution* in meeting dangers. It is true courage to meet dangers in a good cause; but it is *fool-hardiness* to seek dangers, or to go into dangers in a bad cause.

I can *distinguish* one thing from another by comparison, and by using my senses. I can distinguish a circle from an oval, or a square from a parallelogram. If any one should *doubt* this, I could *prove* the truth of what I said, by drawing and naming these figures. I can also distinguish differences in colours and tints. I can distinguish that a thing is what it is—that a man is a man, and that a hat is a hat. If I see a hat lying before me, nothing can make me believe that it is a coat, because I know that my sense of sight and my reflection do not deceive me. If a person were to point to a horse and say,

there is a cow, I know by my sense of sight and my knowledge of these animals that he would not be speaking the truth.

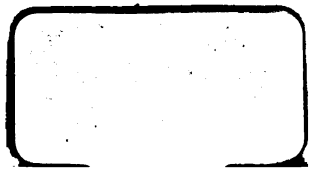
I can *compare* one thing with another, and *decide* or *judge* which is best. I can compare my knife with the knife of another boy, and tell the *difference* between the two. I can compare my book with another book, and decide which is the larger. I can make a *comparison* between my condition and the condition of a poor houseless child, and decide that my condition is preferable. I can compare the distance which I have to walk to school with the distance which another scholar has to walk, and I can tell which distance is the longer, and which the shorter. I can compare three things together, and distinguish which is *good*, which is *better*, and which is *best;* I can also decide which is *bad*, which is *worse*, and which is *worst*.

I know the difference between a *cause* and an *effect*. When the wind blows very hard, trees are blown down, and fall on the ground; the blowing of the wind is the cause, and the falling of the trees the effect. If any one were to say to me that the trees fell because a cat was heard to mew, I should know that that could not be the case. If I strike a nail on the head with a hammer, and make it sink into a piece of wood, I know that the stroke of the hammer is the cause of the sinking of the nail. God is the great first cause, and sustains all by his mercy and goodness.

I can exercise my *imagination*. I can *imagine* the appearance of a thing if it were different from what it is. I know that I have a light-coloured face, but I can imagine what my face would be like if it were covered with soot; I can imagine that it would be very dark. When I am hungry, I can imagine what pleasure I should have in eating. If I were to become ill, I can imagine how anxious my parents would be to have me well again. If I were to steal or lie, I can imagine how every body would despise me, and how unhappy I should be. I can imagine to myself my father and my mother, although they

be absent. I can imagine the pleasure of walking in a field or in a garden in a beautiful day, and imagine the pain of walking barefooted amidst snow in the cold of winter. All this would be the exercise of my *imagination*.

I can exercise my *memory*. I can *remember* or *recollect*. I can recollect rising from bed this morning, and putting on my clothes. I can remember when I was sent to school. I have a recollection of persons who are dead. I remember a story which was told to me, a pain which I formerly felt, and a pleasure I experienced long ago.

THE END.

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